

# BRAHMAGIRI AND CHANDRAVALLI 1947: MEGALITHIC AND OTHER CULTURES IN THE CHITALDRUG DISTRICT, MYSORE STATE

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The excavations which are the subject of the following report were undertaken as a part of a co-ordinated plan for 'opening up' the archaeology of South India. Until 1945 almost nothing had been done to systematize the civilizations or cultures of the pre-medieval era in the South. The cultural environment of the Buddhist monasteries and sculptured stūpas which had been disclosed had been largely ignored. Megalithic monuments had been ransacked rather than excavated, sometimes with the help of dynamite. Urnfields had been gathered up like rice-crops. Undocumented and heterogeneous collections of stone implements had, in favoured instances, found their way into museums. In very rare cases a town-site had been trenched and a confused mass of material scraped up from it. Meanwhile, theory had been active in inverse ratio to the evidence available. Sumerians, for example, had been derived from South India, or Dravidians from Sumer. The most that could be said for such theories was that they could not be disproved.

In 1945, after systematic search, a site was found near Pondicherry (Arikamedu) where imported objects of known date occurred side by side with, and therefore gave precise chronological definition to, an Indian culture which was otherwise unplaced. At once a firm base was provided for further advance. Enquiry revealed distinctive elements of this newly identified Indian culture on other sites in the Deccan and South India: notably in the Chitaldrug District of northern Mysore, on sites in Hyderabad State, and on others at Amarāvati in the east and within the southern part of the Bombay Presidency in the west. A coherent archaeological map of South India in the earliest centuries A.D. began to take shape. That shape was still nebulous enough, but through the mist definite objectives began to loom up. By proceeding methodically from the known to the unknown, by exploring a carefully selected series of sites which included recognizable elements with others that were new, a steady progression now for the first time became feasible.

Choice fell first upon the two Chitaldrug sites which are here described. At both these sites distinctive elements of the Arikamedu culture had already been found. At both also, but particularly at Brahmagiri, were other important factors—megalithic tombs, stone axes, microliths, painted pottery—about which no accurate information had hitherto been available. Here at last was, not merely a chance, but a reasonable certainty of securing the desired knowledge. And confident hope has been justified by the event. A clear succession of three main cultures has been determined and, above all, a fixed point established in the chronology of the megalithic tombs which are characteristic of South India and may possibly (though this is not proved) have a significant relationship with similar tombs as far afield as western Asia and Europe.

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## PART I.—INTRODUCTORY

THE excavations here described were carried out in March, April and May 1947 by the Archaeological Survey of India in collaboration with the Archaeological Department of Mysore State. Their main objective was the correlation of a typical megalith culture with the culture or successive cultures of an adjacent urban site which had already produced evidence of a definable chronological datum-line. This objective was an important one and requires amplification.

India south of the Vindhyas—the Deccan or Peninsular India—has long been known to contain very large numbers of megalithic structures which vary in type but have a common factor in that they consist of unhewn or roughly hewn slabs of stone supplemented, in some instances, by dry-stone walling. Their range in plan, distribution, function and date has never been adequately defined, and it will be several years before the essential ground-survey of them begun by the Archaeological Survey of India in 1944 can approach completion. Meanwhile it may be observed that the dominant type is a large cist, built above or below ground and usually surrounded by a stone circle. Other megalithic monuments include small cists, circles (which sometimes but not always enclose buried



cists), menhirs and alignments. The cists, frequently in large groups, occur mainly on the granite and laterite of the Peninsula but are also found sporadically on the limestone and sandstone of the north-west.<sup>1</sup> Their relationship with other types of megalith in central and north-eastern India is probably negligible, and the unqualified use of the term 'megalith' in the two contexts, however correct, is liable to mislead. C. von Füller-Haimendorf has reasonably emphasized the essential separateness of the two: the megalithic cists of the south having an Iron Age equipment and western analogies, the megalithic memorial stones, etc., of the centre and the north-east having possibly 'neolithic' associations and an Indonesian or south-east Asian orientation.<sup>2</sup> That occasional overlaps between the two groups should occur in central India is but natural.

With the north-east Indian (or south-east Asian) group we are here no more concerned. The main function of this report is to present evidence which for the first time establishes a fixed chronological point for a representative series of South Indian megalithic tombs, and indicates the method of their use. Discussion of the possible relationship of these tombs with comparable structures elsewhere in Asia, in Europe and perhaps in Africa is reserved for an Appendix (p. 300), which should be read as a supplement to Professor Gordon Childe's paper above (p. 4). For the moment it will suffice to observe that this relationship has been postulated not merely upon a general basic resemblance of the crude megalithic principle in India and the West, but upon a community of specialized details of which the most notable is the 'port-hole' entrance. Indeed, were it not for the wide and formidable disparity in date between the Indian cists and their Western analogues, a significant interrelationship could scarcely be questioned.

To the excavation itself and to the preparation of the report many hands have contributed. Under my general direction, the primary responsibility for the detailed work of organization and supervision in the field and for subsequent analysis of the results fell to Mr. B. B. Lal as officer in charge of the Excavations Branch of the Archaeological Survey of India. With him collaborated an excellent team of supervisors, including Mr. M. N. Deshpande, Mr. A. H. Dani, Mr. V. D. Krishnaswami, Dr. Y. D. Sharma and Mr. B. K. Thapar, with about forty research-students from the Indian universities. The pottery was organized and classified by Mr. S. C. Chandra, and the Chandravalli coins by Mr. Krishna Deva. Special credit is due also to the staff-photographer, Mr. S. G. Tewari; the draftsman, Mr. Raghubir Singh; and the surveyors, Mr. Ballabh Saran, Mr. K. Ramaswami and Mr. Bhaskaran Nair. Mr. L. Narasimhachar was present throughout as a colleague and as representative of the hospitable Mysore State. Lastly, the French Government seconded to our staff M. and Mme. J. M. Casal from Pondicherry and M. J. P. Trystram from the Délégation Archéologique Française at Kābul, all of whom are now engaged upon archaeological fieldwork in or of close concern to India.

A detailed report on the human bones found during the excavation is being prepared by the Anthropological Survey of India and will be published at a later date.

#### THE PLANNING OF THE WORK

The method whereby the new evidence was sought and obtained was as follows. In 1945, the Archaeological Survey of India, at Arikamedu near Pondicherry on the Coromandel coast, dated an extensive Indian ceramic industry by its association with imported

<sup>1</sup> For the distribution of megalithic cists with port-holes, see fig. 1 and below, p. 305.

<sup>2</sup> 'The Problem of Megalithic Cultures in Middle India', *Man in India*, XXV (1945), 73ff. I would suggest caution in ascribing even a relative chronological connotation to the term 'neolithic' in this connection. It is likely enough that much of the 'neolithic' of the north-east is contemporary with the Iron Age of the south.



Mediterranean pottery and glass of the first century A.D.<sup>1</sup> The industry included a distinctive type of polished black or black-and-yellow dish bearing on the inside of its base two or three concentric rings of pattern formed by a cogged cylinder or roulette held against the unbaked vessel as it rotated on the potter's wheel. This roulette-pattern is foreign to Indian ceramic and was derived from the imported Mediterranean (Arretine) pottery, to which it is normal. Its first appearance in India is very unlikely to have been earlier than the beginning of the first century A.D., but is certainly not later in origin than the second quarter of that century. Once established, the type lasted at Arikamedu into the second century.

Subsequently to the Arikamedu excavations, I observed at Mysore two or three sherds of identical ware which had been obtained by the State Archaeological Department some years previously from a site in the Chitaldrug District, the northernmost district of Mysore State. The site, known as Chandravalli, 1½ miles south-west of Chitaldrug itself, had also yielded four or five Roman denarii (2 of Augustus, 2 of Tiberius and 1 unidentified) of the first half of the first century A.D.—evidence consistent with that of Arikamedu—together with many potin issues of the Āndhra kingdom less securely dated but belonging mainly to the first two centuries A.D. A distinctive local ware, allegedly from the same general horizon as certain of the Roman coins, had a polished russet-coloured surface with rectilinear white or yellow (often criss-cross) pattern. This yellow-painted ware is also abundant on the Āndhra sites of Māsiki and Kondāpur as excavated by the Hyderabad State Archaeological Department.<sup>2</sup> On all grounds it was evident that, with useful external contacts in the form of rouletted ware and Roman coins, Chandravalli was capable of producing a representative Deccan culture centring upon the first century A.D.

But that was not all. The late Dr. M. H. Krishna, Director of the Mysore Archaeological Department, had with his colleagues carried his pioneer-work further afield, to the neighbourhood of Siddāpur, 45 miles away to the north-east in the same Chitaldrug District and some 30 miles south of Bellary. There, at the foot of the granite outcrop known as Brahmagiri, in the vicinity of no fewer than three copies of Aśoka's Minor Rock-edict no. 1—the most southerly known point of the Mauryan empire—he had identified a site which must be that of the town of *Isila* mentioned in that edict. With assistance from his colleague, Mr. L. Narasimhachar, he had subsequently carried out trial-excavations not only on the town-site itself but also in certain of the very large number of megalithic cists which fringe it on the plain. The evidence thus obtained has not been published and is not sufficiently documented for detailed analysis, but it included a somewhat poorer<sup>3</sup> representation of the Āndhra culture of Chandravalli, and relics of a culture or cultures associated with polished stone axes and microliths.

Though much remained in doubt, it was evident that here, at Chandravalli and Brahmagiri, were potentialities of high importance. They may be stated as follows:—

- (i) Proceeding from the established results of Arikamedu, and with the possibility of support from reliable coin-evidence, it was clear that careful digging at the relatively rich site of Chandravalli would define the local Āndhra culture of the first century A.D.

<sup>1</sup> *Ancient India*, no. 2 (1946), pp. 17ff., and particularly pp. 45ff.

<sup>2</sup> Pottery now in the Hyderabad Museum and on the site of Kondāpur. For the distribution of this ware, see below, p. 308.

<sup>3</sup> For example, only one coin (a chance-find) has been picked up at Brahmagiri, whilst at Chandravalli coins are abundant.





A. *Brahmagiri from the north*



B. *View from Brahmagiri, looking east. Cuttings Br. 21-2 in foreground;  
site of cists in middle-distance, right*





A. View from Brahmagiri, looking north. Cuttings Br. 21-3 in foreground



B. Brahmagiri: street on town-site (Br. 23)



- (ii) With that information, it would be easy enough to establish a corresponding datum-line at the somewhat poorer but partially contemporary site of Isila (Brahmagiri).
- (iii) Having established the Brahmagiri datum-line, deep digging there might be expected to relate to it the other local cultures, represented respectively by the adjacent megalithic tombs and by the stone axes and microliths previously found by Dr. Krishna.

Amongst these various objectives, it was the presence of the megaliths at Brahmagiri that determined the present undertaking. South India is eminently a land of temples, but even the temples are there outnumbered by these ancient tombs. And we know scarcely anything about them. A thousand megalithic cists might be excavated with the utmost care without any significant addition to our knowledge of their chronology. Only by placing their culture in a related culture-sequence, such as an adjacent town-site could alone be expected to provide, was it possible to ensure a substantive advance of knowledge. Brahmagiri provided the desired coincidence. With its dated, or at any rate datable, 'Andhra' culture and its vast field of megaliths, it appeared to supply all the necessary factors for an initial scientific study of the Indian megalithic problem. And, in anticipation, I may say at once that it yielded clear and positive evidence in an even fuller measure than we could have dared to expect.

The following report is divided into four main parts: first, a description of the Brahmagiri megaliths and of the general nature of the evidence which they yielded; secondly, an account of the cultures (megalithic and other) identified on the Brahmagiri town-site; thirdly, a note on the cultures established by renewed excavation at Chandravalli; and, fourthly, appendices dealing principally with cultural distributions.

Chronology is discussed below (pp. 200 and 300)

## PART II.—BRAHMAGIRI

Brahmagiri is a granite outcrop, rising some 600 feet above the plain, within the Molakālmuru Taluk of the Chitaldrug District in the northern extremity of Mysore State. Of several small villages in the neighbourhood, Siddāpur(a) is the best known from its frequent association in publication with the three adjacent copies of the Minor Rock-edict no. 1, which constitute the most southerly memorial of Aśoka's empire.<sup>1</sup> That the site was in fact near Aśoka's frontier is indicated by the statement in the Edict that it was 'issued . . . . (that even) my borderers may know (it)'; and the instructions are directed to 'the Mahāmātras at Isila', which may therefore be taken as the name of the ancient township hereabouts.

It was in a deliberate search for the Isila of Aśoka that Dr. M. H. Krishna identified it in the site which is the main subject of the present report. A clear general account of the local topography was prepared by him in 1940,<sup>2</sup> and excavations were carried out by the Mysore Archaeological Department on the site in 1942.<sup>3</sup> We need not agree either with Dr. Krishna's provisional chronology or with his assessment of the culture-sequence

<sup>1</sup> E. Hultzsch, *Corpus Inscriptionum Indicarum, I, Inscriptions of Aśoka* (Oxford, 1925), pp. xxvi and 175ff. The interpretation of the latter part of the inscription is doubtful; see alternative versions adopted by V. A. Smith, *Aśoka* (Oxford, 1920), p. 152, and D. R. Bhandarkar, *Aśoka* (Calcutta, 1925), p. 329; and cf. E. Senart, 'The Inscriptions of Piyadasi', *Indian Antiquary*, XXI (Bombay, 1892), 62ff.; and V. A. Smith and F. W. Thomas, *ibid.*, 1908, 3ff.

<sup>2</sup> *Mysore Arch. Dept. An. Rep. for 1940* (Mysore, 1941), pp. 63ff.

<sup>3</sup> *Ibid.* for 1942 (Mysore, 1943), pp. 100ff.



to appreciate the high value of his pioneer-work both here and at Chandravalli (above, p. 184). All that was achieved in 1947 was based upon his previous revelation of the potentialities of the two sites.

Without a recapitulation of the whole of Dr. Krishna's ground-survey, the salient features of the area with which this report is immediately concerned may be noted (pls. LXXI-LXXVI). The northern slopes of Brahmagiri, largely covered by a tumbled mass of granite boulders, bear extensive signs of ancient occupation in the form of potsherds, fragmentary walls and remains of small terraced platforms roughly revetted with dry-stone walling. It is to be presumed that two thousand years ago more earth remained amongst the boulders than at the present day, and that much evidence of this part of Isila has been washed away. But at all times the main area of occupation must have lain, as surface-remains and excavation combine to indicate, along the gentle slope which forms the transition from the hill to the plain. Here a long strip some 200 yards in width is a mass of occupation-earth and sherds. Beyond it, the fringe of the plain itself, to a depth of 500 yards or more and a length of about a mile, forms what must once have been an almost continuous belt of megalithic structures, mostly cist-tombs. Many of these have been removed by agriculturists, but some hundreds still survive in intermittent patches.

In the midst of the zone of occupation stands the great boulder which bears on its upper surface the best-preserved of the three copies of the Edict, the so-called Brahmagiri version. A furlong to the south-east, up the hillside, is a small brick chaitya, excavated in 1942 and again in 1947—a sadly ruined structure (fig. 2) but nevertheless the most

## BRAHMAGIRI, MYSORE: BRICK CHAITYA

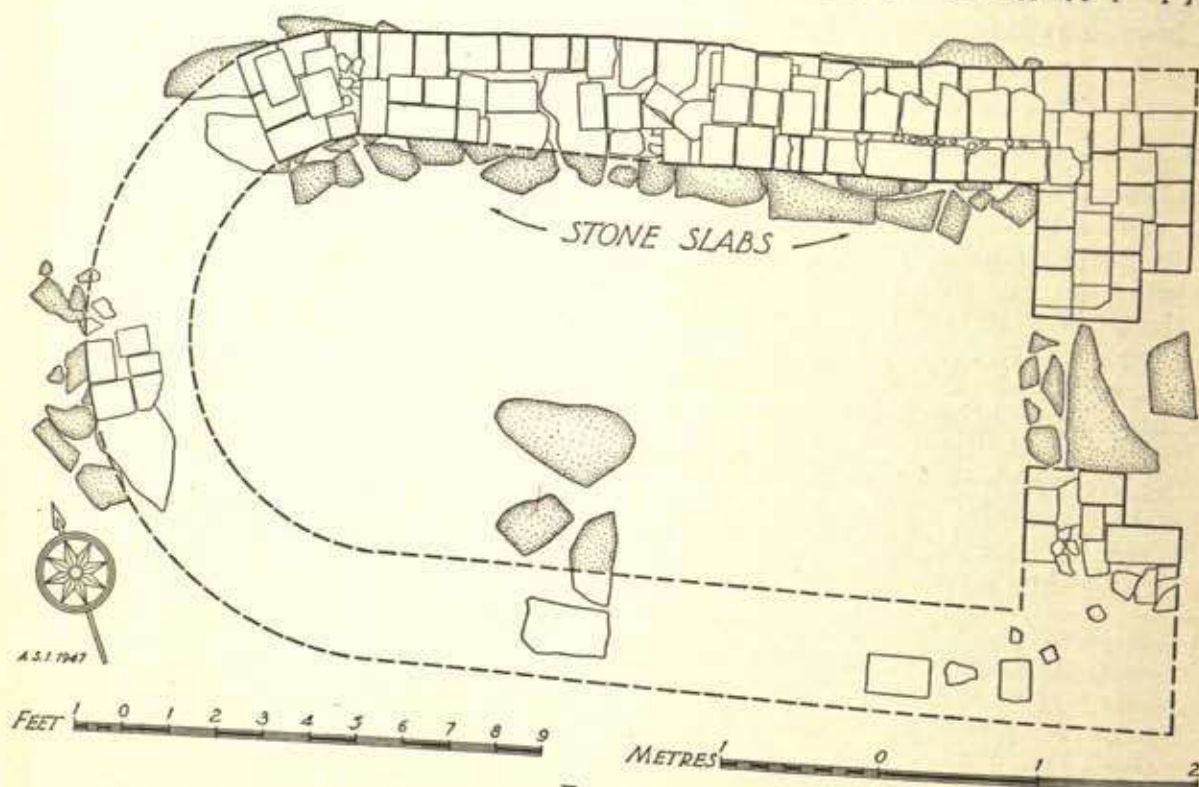
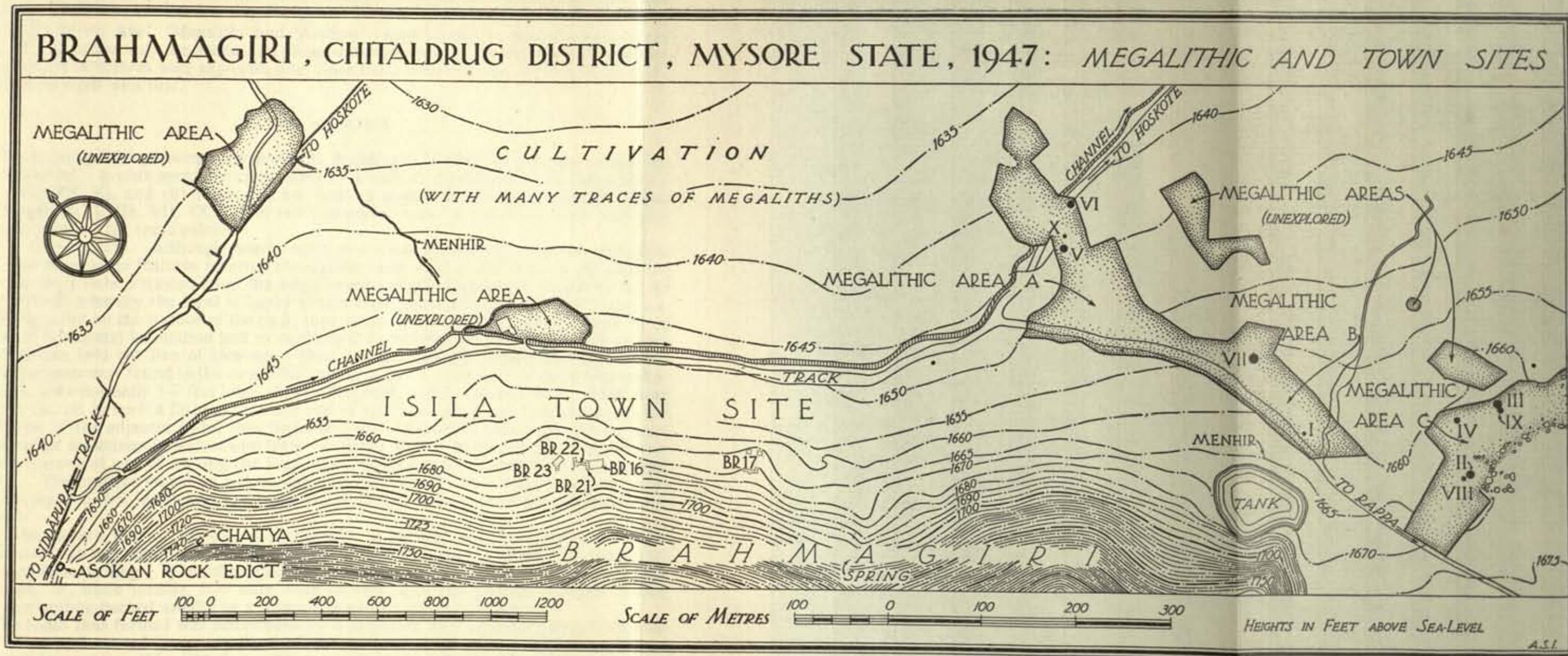


FIG. 2











coherent surviving monument of Isila save for the megaliths.<sup>1</sup> Near the eastern end of the zone is an excellent water-supply at the base of the hill.

In 1947 three trial-pits were sunk at the western foot, but the most informative area lay to the north-east, in sites Br. 21, Br. 22 and Br. 23, where the three main cultures—'Brahmagiri Stone Axe', 'Megalith' and 'Andhra'—were found in clear succession, and in site Br. 17, where only the Stone Axe phase was represented. To the east of these sites, ten megalithic structures were explored, and, since these were the focus of the whole work, they shall be dealt with first.

### (i) THE MEGALITHS

The ten megalithic structures excavated at Brahmagiri in 1947 fall into two categories: (A) Cist-circles, i.e. cists normally surrounded by a built or monolithic circle (Megaliths I, IV, V, VI, VII, X), and (B) Pit-circles, i.e. built or monolithic circles enclosing unlined pits (Megaliths II, III, VII, IX). The two categories occur in the same areas and their contents represent the same culture.

A. CIST-CIRCLES. Although nearly every cist-tomb excavated presented individual detail, the same main features recurred throughout, and were as follows. A pit was dug and lined with slabs obtained from the neighbouring granite exposures, doubtless by the same methods whereby the local villagers obtain their granite blocks or slabs today, i.e. by lighting a fire on the surface of the rock, thus warping and loosening the top layer along the line of horizontal lamination and so enabling it to be removed by the insertion of iron wedges driven into the line of cleavage. (Iron wedges identical with those now in use for this purpose were found in the megaliths, below, p. 257.) The slabs, roughly trimmed at the edges, were normally 5–7 feet long, about 6 feet high, and 2–4 inches thick. They were set up in the pit in such a fashion that one end of each slab projected laterally across the end of one of the adjacent slabs, thus forming a sort of svastika plan, often in an anti-clockwise but sometimes in a clockwise form—a device with no necessary significance other than the structural one of locking the four sides together and of preventing their inward collapse. The uprights rested on a floor-slab and were covered by a massive and irregular capstone, up to a foot in thickness and sometimes 15 feet across, which has generally been removed.

In the eastern wall of the cist was invariably a circular hole (port-hole), 1½–2 feet in diameter. It was approached externally by a downward ramp flanked by orthostats or by dry-stone walling. When the ritual was complete, the opening was sealed by a thin stone slab, or, more usually, two slabs back-to-back, and the passage-way was walled up by dry walling backed usually by a mixture of earth and lime (*chūnam*).

The tomb thus formed was surrounded by a dry-stone wall, probably up to capstone level. This wall started from one flank of the entrance-ramp and usually ended at the other, but in one case (Megalith I, p. 190) it overlapped itself, thus forming an incipient spiral on plan. This surrounding wall might complete the structure but was more often supplemented by a circle of untrimmed granite boulders (Megaliths IV and VI). One tomb (Megalith V, p. 190) was surrounded by two concentric circles of orthostats with intervening and enclosing dry-stone walls probably of lesser height. The over-all diameter of the surrounding circles ranged from 16 feet to 21 feet.

<sup>1</sup> Most of its floor has gone; there is no trace of any former stūpa within the apse, and no evidence as to date was preserved. The bricks measure 1' 5" × 9" × 3-3½", and may be thought therefore to indicate a fairly early date.



The top of the cist and the greater part of the surrounding wall or walls usually rose some 3 feet above the old ground-surface, and the interval between them was heaped up with earth and small stones, forming an enclosed cairn. There is no evidence that the whole structure was so covered, and we may suppose that the original appearance of the tombs was that of a massive capstone crowning a low cairn, usually within a circle of boulders or orthostats.

In addition to cists of the normal size described above, there were numbers of ancillary small cists (pp. 190 and 194). Their shallowness and proximity to the surface militated against the general survival of their contents, but certain of them retained one or more small pots, and one included fragments of adult human bone. There was a tendency to group these small cists round a major cist, but the implication can only be guessed.

From the structure of the cists I turn to the evidence as to their usage.

The main deposit of funeral pottery and other objects (ironwork, beads, whorls) lay on, or practically on, the floor-slab. The pots might be as few as six (Megalith V) or as many as sixty-two (Megalith X). Over this deposit a layer of sandy earth some 6 inches in depth intervened between it and the human bones. These consisted either of a collection of long-bones only (Megalith VI) or of long-bones and skulls, which might be as many as six in number (Megalith I). The bones had been excarnated elsewhere, and the manner of their interlocking showed that they had all been introduced at the same moment, like a bundle of faggots. They lay in the centre of the tomb, or somewhat west of the centre—never at the eastern end where, it may be inferred, they were introduced through the 'port-hole' by someone who entered also through it and stood at this point.<sup>1</sup> It is to be assumed that the 'port-hole' was the regular ingress both for offerings and for bones; most of the former were placed there some time before the latter, and it is highly improbable that they were left exposed, without a capstone, during the interval. Furthermore, we may suppose on general grounds that the main structure of the tomb, with its massive covering, was completed before its utilization.

With the bones, a few additional pots might be introduced with secondary offerings. The whole deposit was then deliberately buried in earth inserted through the 'port-hole' and therefore ceasing on a level with the base of the latter—an additional indication that the capstone was already in position. The regular occurrence of a line in the filling at this point makes the inference certain. The 'port-hole' was then closed by its doorslab or slabs and the entrance-passage was walled up. Thereafter, as the monument fell into ruins or was partially destroyed, a miscellaneous accumulation of earth and stones filled the upper part of the cist.

Thus, although these tombs contain the selected bones of more than one individual, they were rarely used on more than one occasion.<sup>2</sup> The usage fell into two parts: the initial insertion of the major part of the offerings, and, perhaps some weeks later, the addition of the collected bones from a temporary repository elsewhere. The 'port-hole' was the functional entry to the tomb, and its careful sealing was the final and definitive moment of the ceremony.

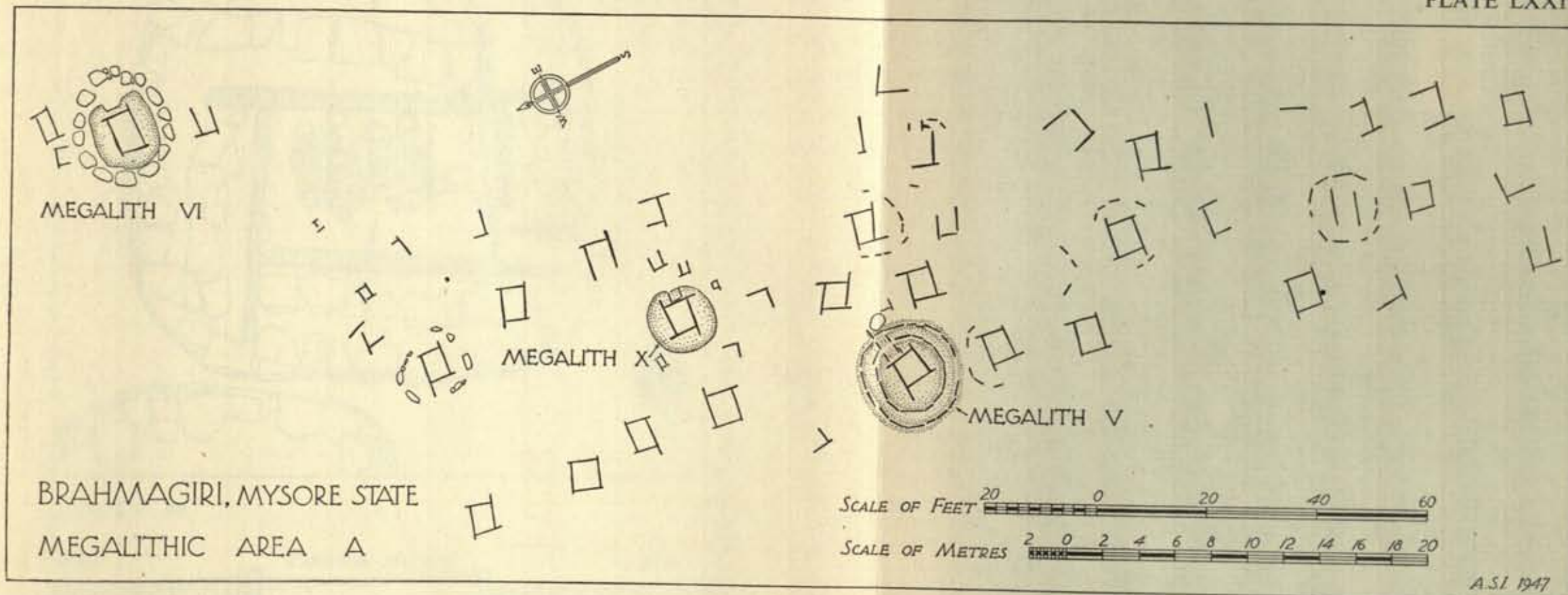
Of the ten megaliths opened this season, nos. I, IV-VI, VIII and X belonged to this class of cist-circles. The building-material throughout was gneissic granite.

*Megalith I* (pls. LXXVII and LXXVIII A; fig. 3) was a cist, internally 5 feet 1 inch by 3½ feet at the top and 5½ feet by 3 feet 11 inches at the bottom, with a height of 5 feet 10 inches above the floor-slab. It was built on an anti-clockwise svastika plan, the major axis being 106° magnetic. In the eastern wall of the tomb was a port-hole,

<sup>1</sup> The port-hole opening is not very different in size from the microscopic rectangular doorway of a Toda hut in the Nilgiris at the present day.

<sup>2</sup> Megalith IV (p. 190) may have been used on two occasions.



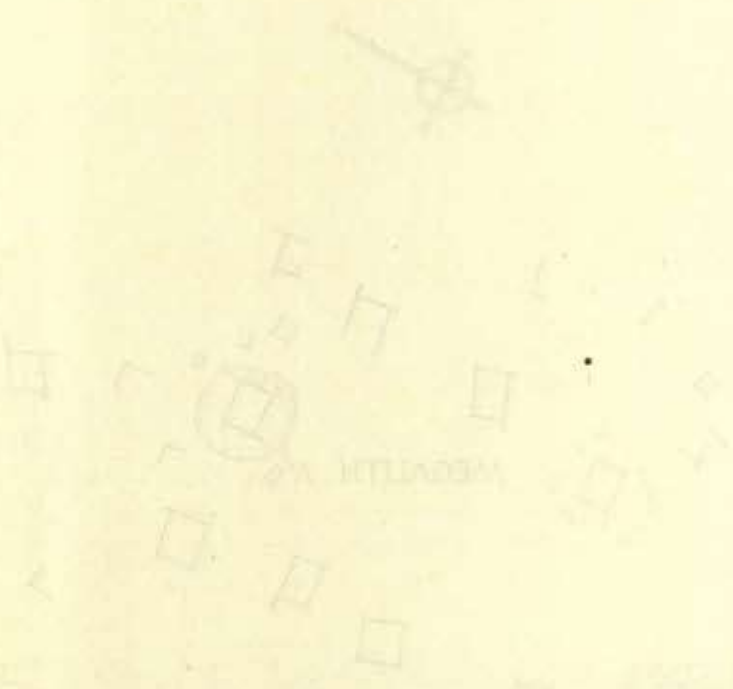




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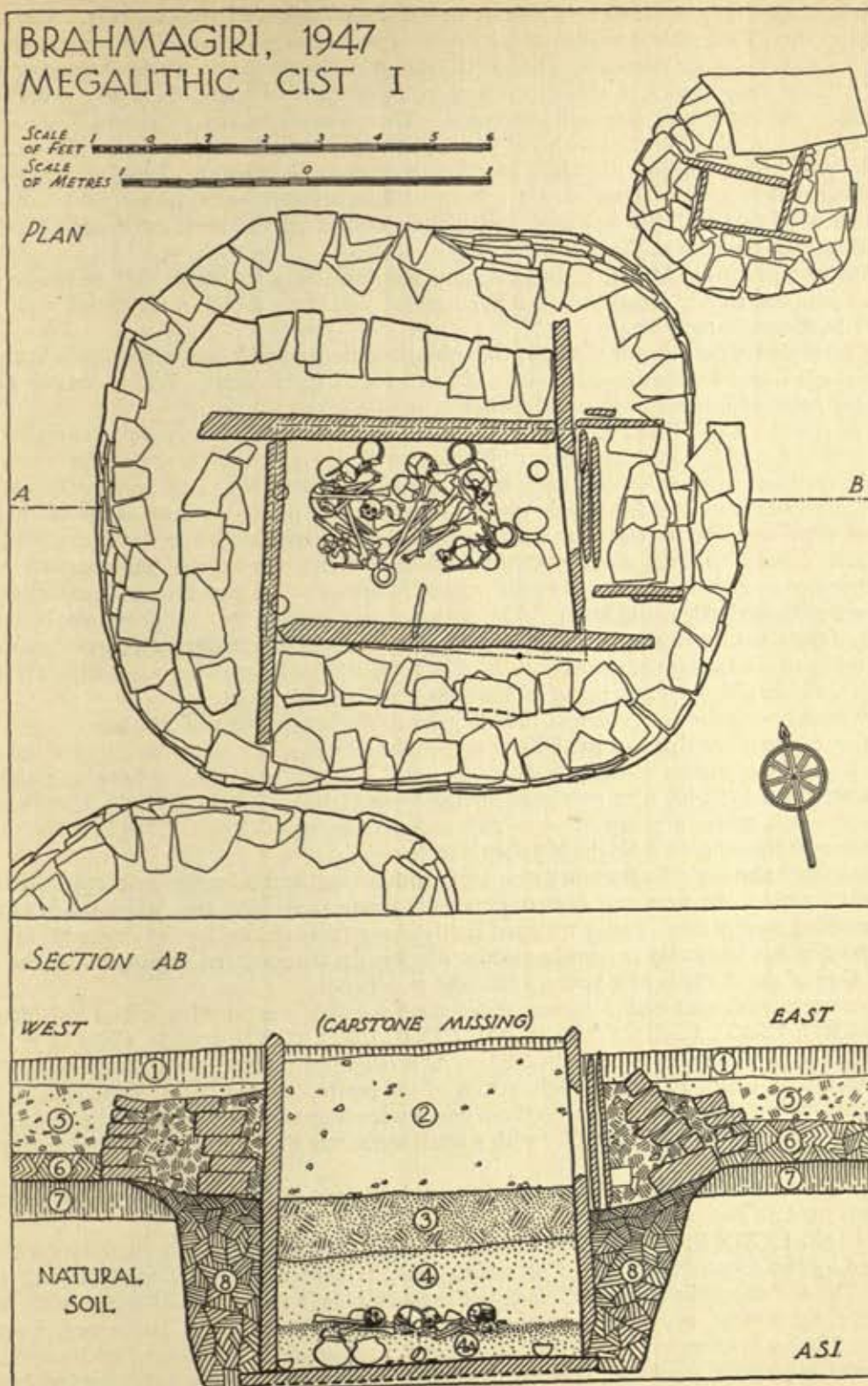


FIG. 3



1 foot 8 inches in diameter, approached by a passage or man-hole flanked by vertical slabs. The port-hole had been sealed externally by a double door-slab and a dry-built wall upwards of six courses in height. This wall started from the slab flanking the port-hole to the north, continued completely round the cist and overlapped itself to a length of 3 feet at the eastern end, thus forming an incipient spiral on plan. Between it and the north, west and south flanks of the cist a secondary wall intervened. There was no enclosing circle of blocks or slabs.

The capstone was missing but the interior of the cist was undisturbed. On or practically on the floor-slab lay twenty-four pots and a decayed iron blade (axe?) with an encircling ring (fig. 36, 10). After these deposits had been covered with a layer of sandy earth, a heap of disarticulated bones including six adult skulls and covering an area of  $3\frac{1}{2}$  feet by 2 feet was deposited slightly west of the centre of the floor. The cist was then filled up to the level of the base of the port-hole.

A preliminary report from Mr. H. K. Bose, Anthropological Assistant, states that, of the six skulls, three (two adult male and one elderly female) are brachymorphic; and three (adult male and female and a child 12-14 years old) are dolichomorphic.

Close by the cist were the remains of three other cists, including a small one immediately to the north-east. The latter measured 1 foot 5 inches by 10 inches and was 1 foot 2 inches deep. The cover-slab lay alongside. No bones or any other objects save two small potsherds were obtained from it.

*Megalith IV* (pls. LXXVIII B and LXXIX A; fig. 4). The capstone,  $1\frac{1}{2}$  feet thick and at least 9 feet 7 inches long, had been pulled slightly aside and blasted by modern stone-robbers. Three fragments survived and are reunited on the plan and section. The eastern and northern orthostats had also been broken.

The tomb consisted of a cist 5 feet 7 inches by  $4\frac{1}{2}$  feet at the top, nearly the same at the bottom, and  $6\frac{1}{2}$  feet in height above the floor-slab. It was built on an anti-clockwise svastika plan, the major axis being  $106^{\circ} 45'$  magnetic. In the eastern orthostat was a port-hole, 1 foot 11 inches in diameter, the approach to which was flanked on either side by a short irregular dry-built wall of 3 courses. The port-hole had been closed by a door-slab backed by a *chūnam* (limey earth) filling. The causeway was blocked by a rough granite boulder.

The walls of the cist were retained externally by a composite wall of untrimmed granite boulders and dry-stone walling rising to a maximum of three courses. The tomb was surrounded by a further circle of untrimmed granite boulders, within which a scattering of rubble represented the former cairn.

There had been no regular occupation of the site prior to the construction of the cist.

The blasting of the cover-slab had partially disturbed the stratification inside the cist, but the usual change of soil at the level of the bottom of the port-hole was noted. Immediately on the floor-slab and towards the northern orthostat of the cist lay nine pots representing types C24(4), C24a(1), C24b(2), C28(1) and C30(1)<sup>1</sup>; while in the south-west corner a group of seven pots representing types C24(3), C24a(1), C28(2) and C28b(1), lay huddled one over the other to a height of 1 foot 5 inches.

On the floor-slab also lay a fragmentary iron knife with a tang, and a broken iron object of indeterminate shape. Scattered amidst the pots and iron objects were found over forty tiny white beads of magnesite or dolomite, resembling seed-pearls. Partly with and partly above these objects lay the fragments of a few ribs and long bones, and 2 inches higher lay two broken skulls, one against the southern orthostat and the other nearer the western. One of the skulls is of a young adult and is dolichoid.

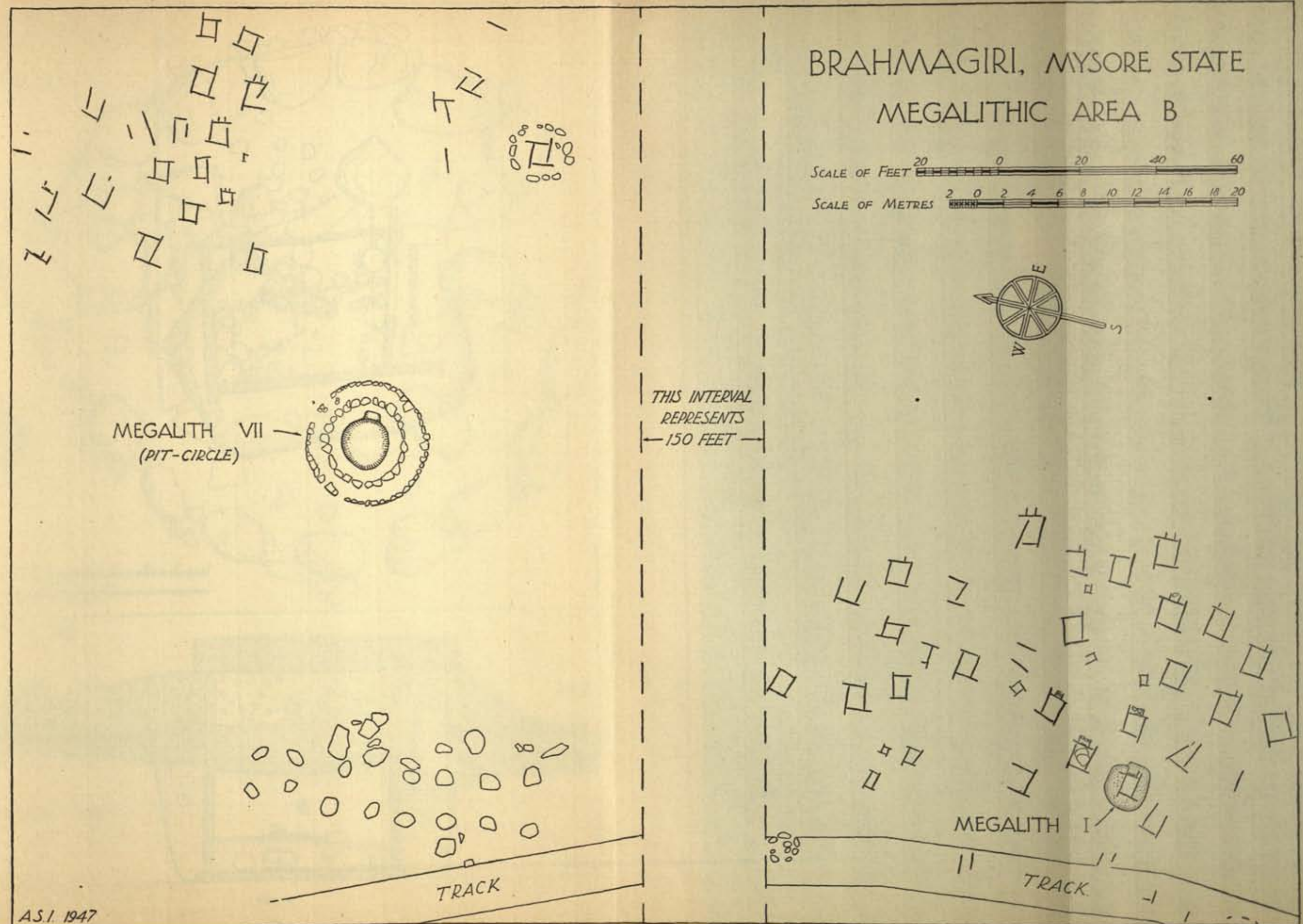
Near the eastern orthostat and 3 inches above the floor-slab was another group of thirty pots representing types C3(5), C3a(2), C3c(1), C5(2), C7d(1), C8b(1), C9(1), C10(2), C12(3), C12a(2), C14(1), C18(3), C19(1), C20(1), C22(1), C24(1), C26a(1) and C28(1). At a height of 1 foot above the floor and covering an area 2 feet 8 inches by 1 foot 10 inches, slightly west of the centre, lay two skulls, some ribs, and a few long-bones. Towards the east and on a level with these bones were four bowls representing types C8(2) and C7(2), three of them set inside one another, together with a small terracotta ring. An indeterminate fragment of iron lay amidst these pots.

The occurrence of the skeletal remains at two different levels and of the pots in two separate groups suggests that the cist was used on two occasions.

*Megalith V* (pls. LXXIX B, LXXX, LXXXII A and LXXXVIII) presented two interesting features: the cist was surrounded by two concentric circles of orthostats and the causeway to the port-hole had a flooring of stone-slabs. The cist was built on an anti-clockwise svastika plan, 5 feet by 4 feet 4 inches at the top,  $5\frac{1}{2}$  feet by 4 feet 10 inches at the bottom, and 6 feet deep, the major axis being  $86^{\circ}$  magnetic. In the eastern orthostat was a port-hole 1 foot 5 inches in diameter, approached by a floored passage which was flanked by three orthostats on the northern side and two on the southern. The port-hole had been sealed by a door-slab backed by roughly built

<sup>1</sup> The figure in brackets after each type-symbol indicates the number of examples.







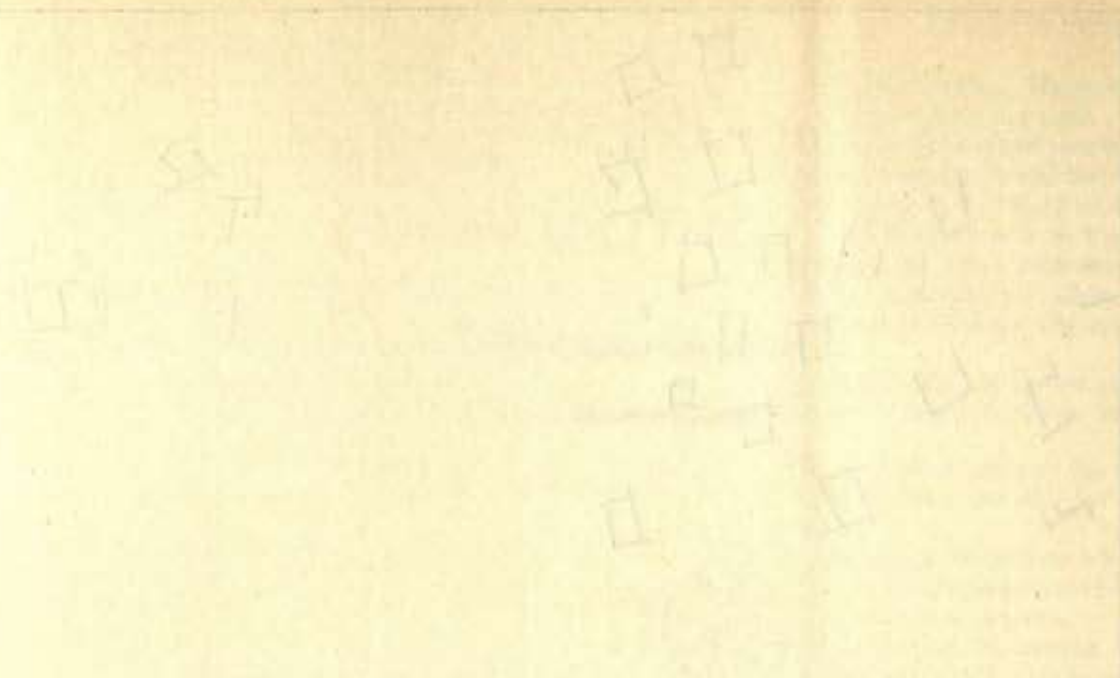
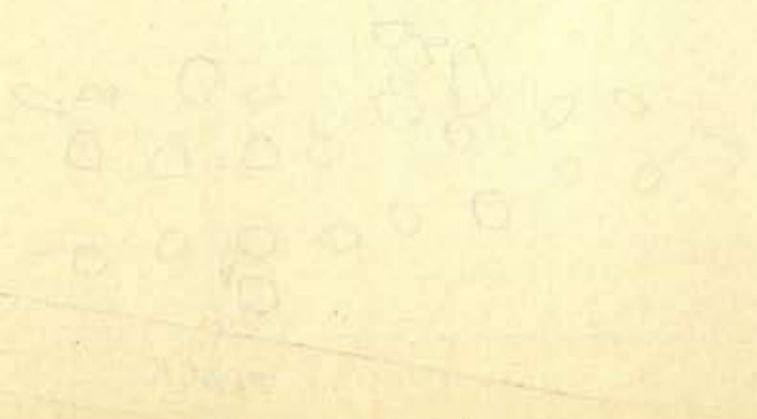


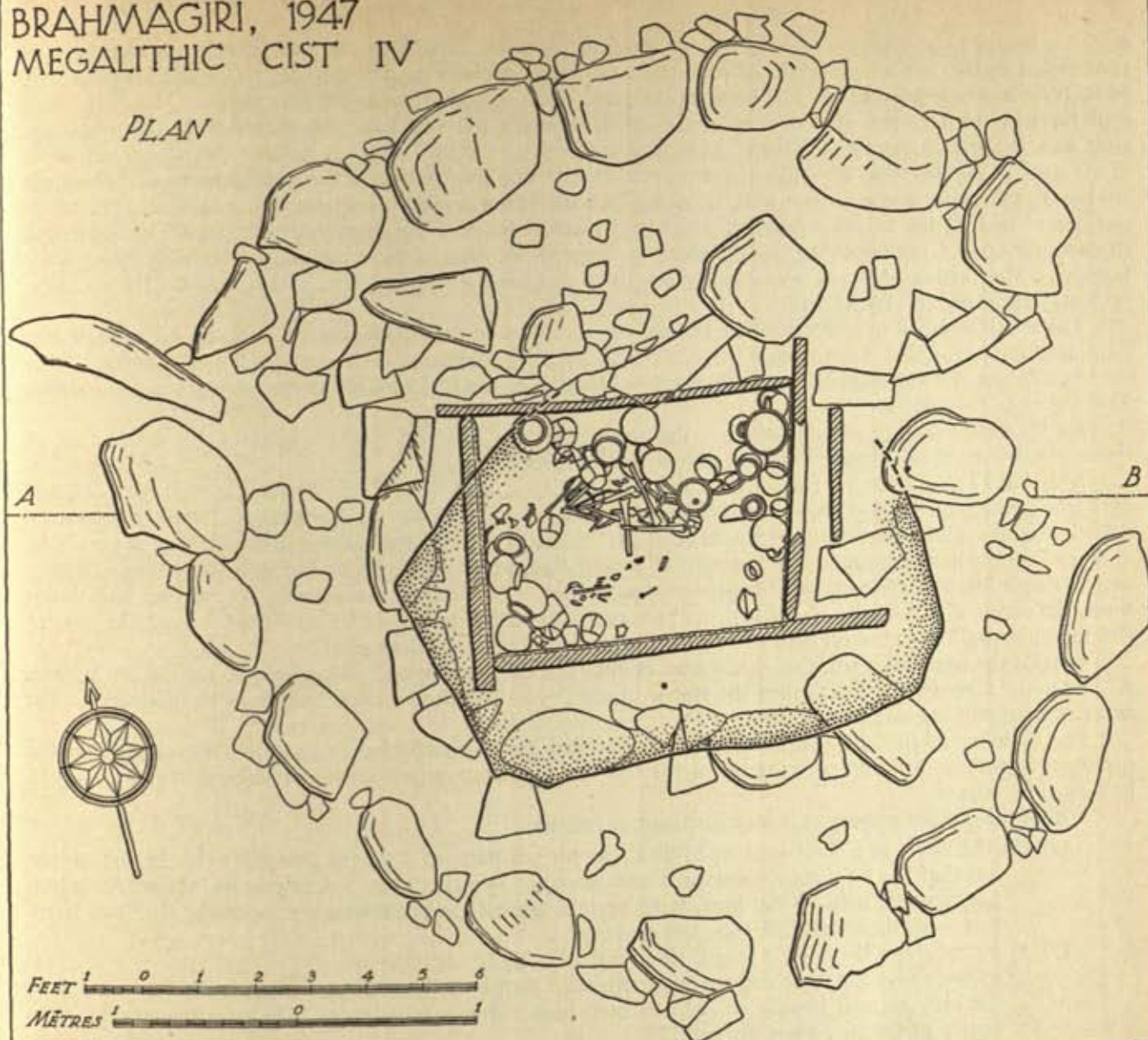
FIG. 1. THE  
CROSS-SECTION OF THE  
CIRCULAR AREA





BRAHMAGIRI, 1947  
 MEGALITHIC CIST IV

PLAN



SECTION AB

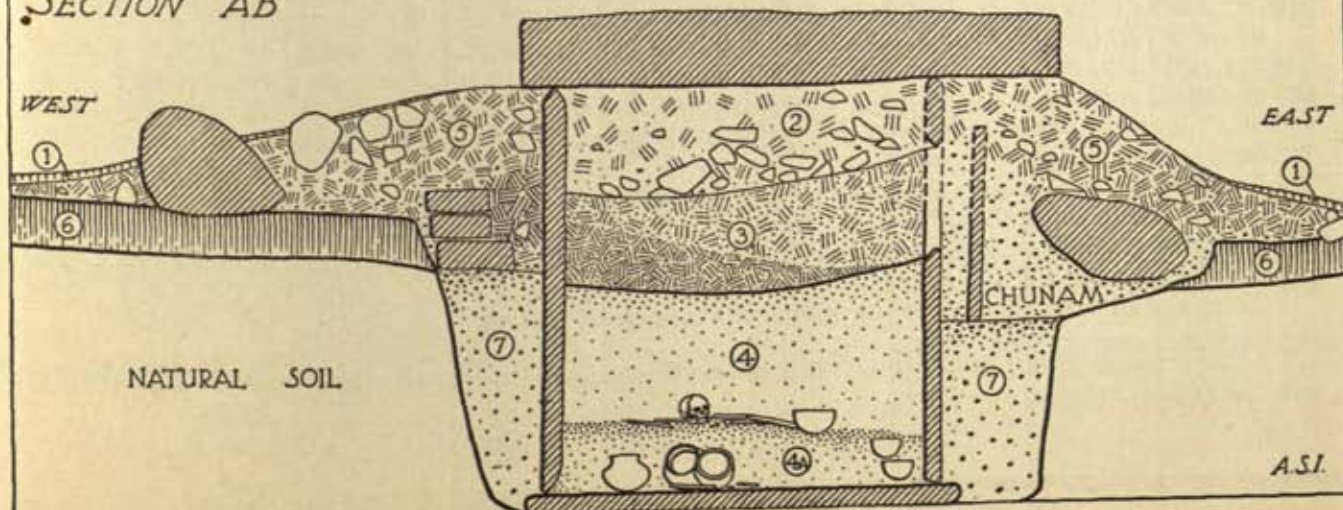


FIG. 4



masonry between the first pair of orthostats flanking the passage. The capstone was missing. The tomb was surrounded by two concentric circles of orthostats, the inner circle being interrupted by the entrance-passage, while the outer continued across it. Between the inner circle of orthostats and the tomb was a dry-built stone wall surviving to a height of 7 courses and battered inwards. It was interrupted by the entrance-passage, and was supplemented by a rough subsidiary wall between itself and the north, west and south sides of the cist. A similar stone wall, likewise interrupted by the entrance-passage, intervened between the concentric circles of orthostats; and a further wall, surviving to a maximum height of four courses, surrounded the whole monument save at the entrance-passage, which was blocked successively from inside to outside by the rough stone filling against the door-slab, by the above-mentioned orthostat of the outer circle, and lastly by a granite boulder. The former capstone was represented by a fragment which lay immediately against the southern orthostat of the cist (pl. LXXIX B).

The stratification inside the cist was undisturbed and showed the usual change of soil at the level of the bottom of the port-hole. Immediately on the floor-slab lay six complete pots and fragments of others.<sup>1</sup>

At a height of 8 to 9 inches from the floor lay a collection of disarticulated human bones including two skulls. There were no iron objects.

An important feature of the tomb was the occurrence, in a level prior to the construction of the cist, of three complete pots, all of the 'megalithic' fabric (pl. LXXXVII and fig. 17, 1-3).

*Megalith VI* (pls. LXXXI, LXXXIII A and LXXXIX) included a cist 7 feet by 4 feet at the top and 7½ feet by 4 feet 7 inches at the bottom, with a height of 5 feet 8 inches above the floor-slab. It was built on an anti-clockwise svastika plan, the major axis being 96° 30' magnetic. In the eastern orthostat was a port-hole, 1 foot 11 inches in diameter, sealed externally by a door-slab, which itself was backed by a slab acting as a strut and also by a lump of *chūnam*. The capstone was missing. The cist was surrounded by two dry-built stone walls, the outer of which was of not less than four courses with a height of 1 foot 7 inches. At the eastern end the outer wall turned in on each side of the port-hole to form the entrance.

Outside the wall was a circle of untrimmed granite boulders resting on and partially in the ancient humus. At one point a boulder rested against the stones of the dry-built wall in such a fashion as to indicate that the latter was structurally earlier.

The building of the cist and the circle was preceded by an occupation of the area, represented by the occurrence of about a dozen pots (fig. 17, 4-13) and two fragmentary iron knives or daggers (fig. 36, 1-2) in levels prior to the cist.

Within the cist the grave-goods were disposed as follows:—

- (a) On the floor, in a shallow layer of dust, the broken parts of a tanged iron knife (fig. 36, 6); an iron bar (fig. 36, 7); a small indeterminate iron object 3½ inches long; a decayed and indeterminate iron bar, not less than 1½ feet long, lying upright against the south-west corner of the cist; two terracotta spindle-whorls (SW1-2); and six pots.
- (b) 1½ inches above the floor, a tanged iron knife (fig. 36, 5) and four pots.
- (c) 10 inches above the floor and covering an area 1 foot by 1 foot 5 inches towards the western end of the cist, a small bundle of eight or nine human bones (no skulls). On the same level near the centre of the cist, a pot of type C20f.

Above these deposits the cist had, as usual, been filled with sandy earth to the level of the base of the port-hole, whereafter other earthen deposits had infiltrated through the top.

*Megalith VIII* (pls. LXXXII B, LXXXIII B and LXXXIV A, and fig. 5) included a cist 5½ feet by 4 feet 2 inches at the top, 6 feet 5 inches by 4 feet 4 inches at the base, and 5¾ feet deep. It was built on an anti-clockwise svastika plan, the major axis being 99° magnetic. In the eastern orthostat was a port-hole, 1 foot 11 inches in diameter, covered by two door-slabs, which in turn were backed by a *chūnam* filling. The capstone was missing.

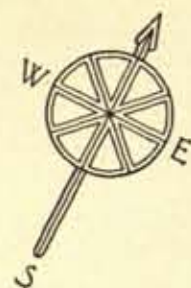
The cist was surrounded by a dry-built stone wall of not less than four courses, 1½ feet in height. Both sides of the approach to the port-hole were similarly faced, the facing being carried back to the surrounding circle of untrimmed granite boulders, within which a scatter of granite rubble represented the former cairn. The port-hole had been closed with a double door-slab.

There was no occupation of the site prior to the building of the tomb.

<sup>1</sup> The presence of fragments suggests that the pottery had previously been exposed elsewhere, presumably with the bodies during exhumation.



# BRAHMAGIRI, MYSORE STATE MEGALITHIC AREA C



SCALE OF FEET 20 0 20 40 60 80 100

SCALE OF METRES 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32

MEGALITH IV

MEGALITH III  
(PIT-CIRCLE)

MEGALITH IX  
(PIT-CIRCLE)

MEGALITH II  
(PIT-CIRCLE)

MEGALITH VIII

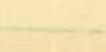
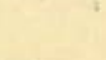
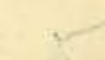
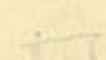
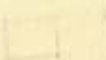
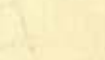
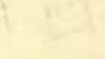
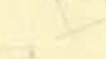
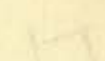
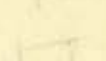




MEGALITHIC VII

MEGALITHIC II

MEGALITHIC I





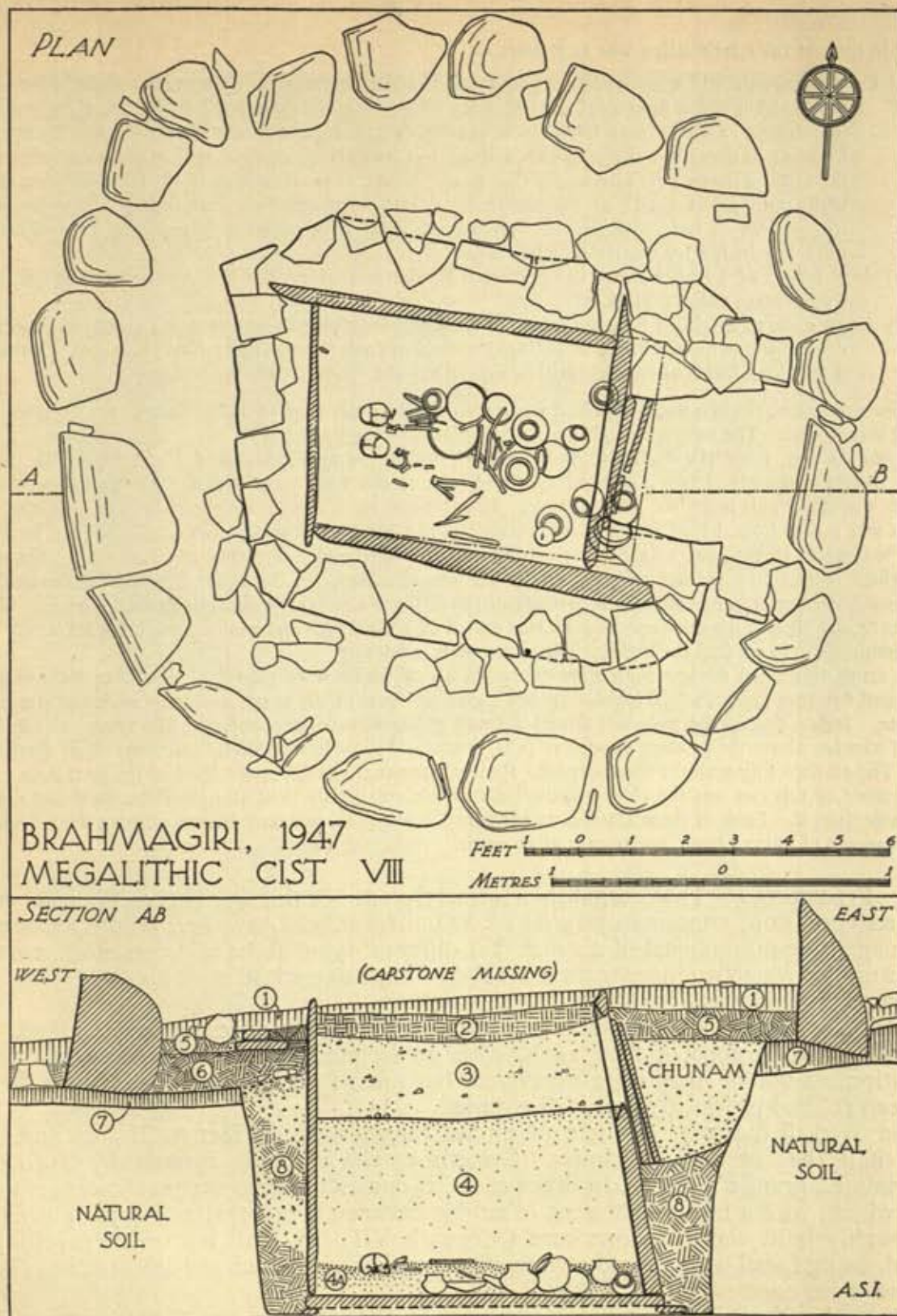


FIG. 5



Within the cist the stratification was as follows:—

- (a) On the floor-slab, in a layer of dust  $\frac{1}{4}$  to  $\frac{1}{2}$  inch in thickness, such as accumulates under normal conditions within a few hours, lay the following objects:—a decayed iron bar (fig. 36, 8), upwards of 11 inches long; a tanged iron knife or dagger (fig. 36, 3); a fragmentary iron knife; and a very decayed iron bar of uncertain shape upwards of 2 $\frac{1}{2}$  feet long, lying upright against the south-east angle of the cist. Fifteen pots also lay at this level. Inside a shallow dish, Type C14, lay over fifty tiny white and green beads of magnesite or dolomite, resembling seed-pearls, and a fragmentary iron object of indefinite shape. Against the same dish rested a fragmentary tanged iron knife over 10 $\frac{1}{2}$  inches long and 1 $\frac{1}{2}$  inches broad.
- (b) At a height of 2 inches above the floor-slab lay the following:—an iron knife-blade (fig. 36, 4) and a fragmentary chisel (fig. 36, 9).
- (c) At an average height of 5 inches from the floor and overlying four pots was a tightly packed mass of disarticulated human bones including two dolichoid adult skulls and covering an area approximately 3 feet by 2 feet towards the western side of the cist.

Above the bones, the cist had been filled with sandy earth to the level of the bottom of the port-hole before the latter was sealed. The subsequent filling had percolated through the top.

*Megalith X* (pls. LXXXIV B, LXXXV–LXXXVII, and figs. 6 and 7) included a cist 5 feet 1 $\frac{1}{2}$  inches by 3 feet 11 inches at the top, 5 feet 2 inches by 4 feet 1 inch at the base, and 5 feet 11 inches high above the floor-slab, the major axis being 90° 30' magnetic. It was built on a clockwise svastika plan. In the eastern orthostat was a port-hole, 1 foot 7 inches in diameter, approached by a passage flanked on either side by a vertical slab. The cist was surrounded by a dry-built stone wall still surviving to a height of 11 courses. The wall had been slightly battered—a feature emphasized by the inward collapse of the upper courses. Between this wall and the northern, western and southern orthostats of the cist was a roughly built supplementary wall. When the tomb was finally closed, the entrance-passage was sealed by a door-slab and walled up (pl. LXXXVI B). There was no boulder-circle around the tomb. The capstone was missing.

The tomb contained no less than sixty-two pots, all of which were placed on the floor-slab, except one isolated and five in a group, which lay 4–6 inches above the level of the bones and were evidently placed along with these. Inside one of the pots was found a small indeterminate iron object. The bones, which lay at a height of 6 inches above the primary deposit of pots, comprised three human skulls and some other disarticulated bones. The earthen filling above these deposits showed the usual change at the level of the port-hole.

A feature of this cist was the close association of three small cists built alongside the main cist and structurally later than it. Each of these small cists contained a few pots, but only in one of them were found some small fragments of human bone, apparently of an adult.

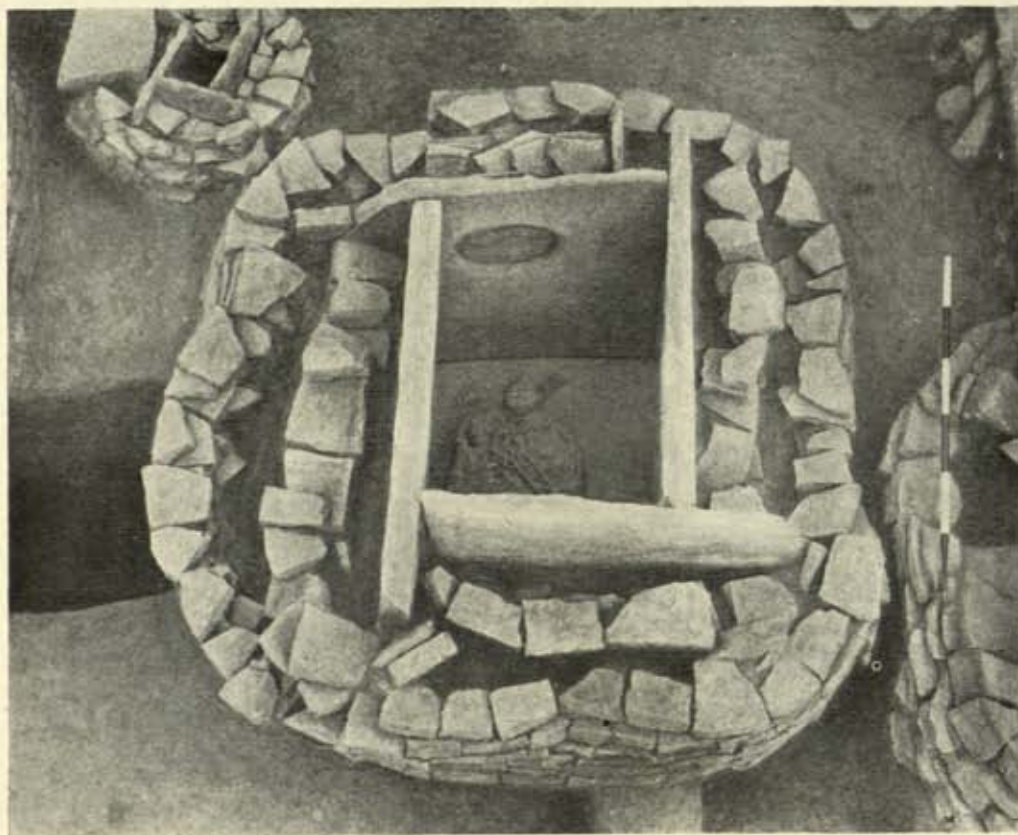
**B. PIT-CIRCLES.** The megalithic cemetery at Brahmagiri, even in its present despoiled condition, contains upwards of 300 cist-tombs. At a few points among them occur megalithic monuments of a somewhat different type, about a dozen in all, consisting of stone circles which on investigation are found each to enclose a pit up to 8 feet in depth. The name 'pit-circle' is here allotted to this type.

In the considerable area surveyed, nine of these pit-circles were identified. They occurred in two groups of four each, with an isolated outlier of exceptional size and elaboration. Four of them were excavated, but one of these (*Megalith III*) was found to have been robbed previously and is discounted.

The over-all diameter of these pit-circles ranges from 20 feet to 31 feet and is thus larger than that of the cist-circles. Sometimes the circle is formed by a single line of untrimmed granite blocks. In other cases, it consists of two concentric circles of these blocks which, with a heavy scattering of rubble between them, evidently represent a former low, roughly built wall. In one case (*Megalith VII*) this wall was more carefully constructed, being faced with roughly trimmed granite blocks which survived to the maximum height of three courses (pl. XCII A).

The enclosed pit is either circular or oval, in the latter case with the longer axis east-west. The diameter ranges from 8 feet to 12 feet. In every case the rim of the pit was





A. *Brahmagiri: megalith I*

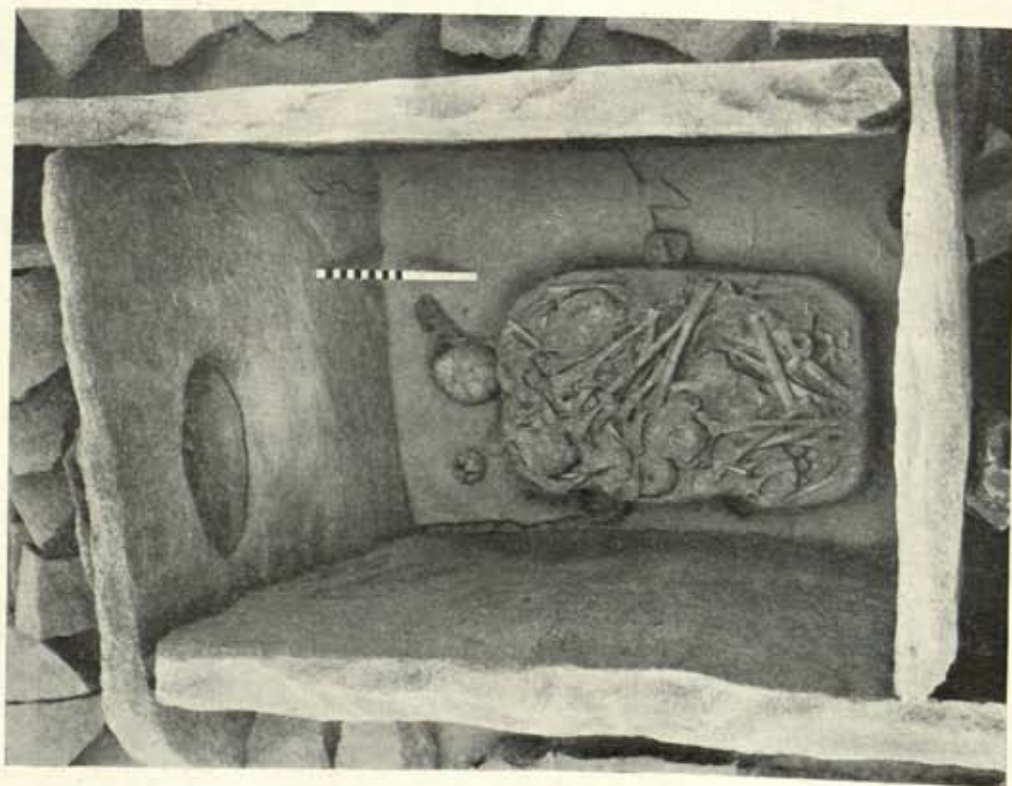


B. *Brahmagiri: megalith I, showing overlap of wall at entrance*



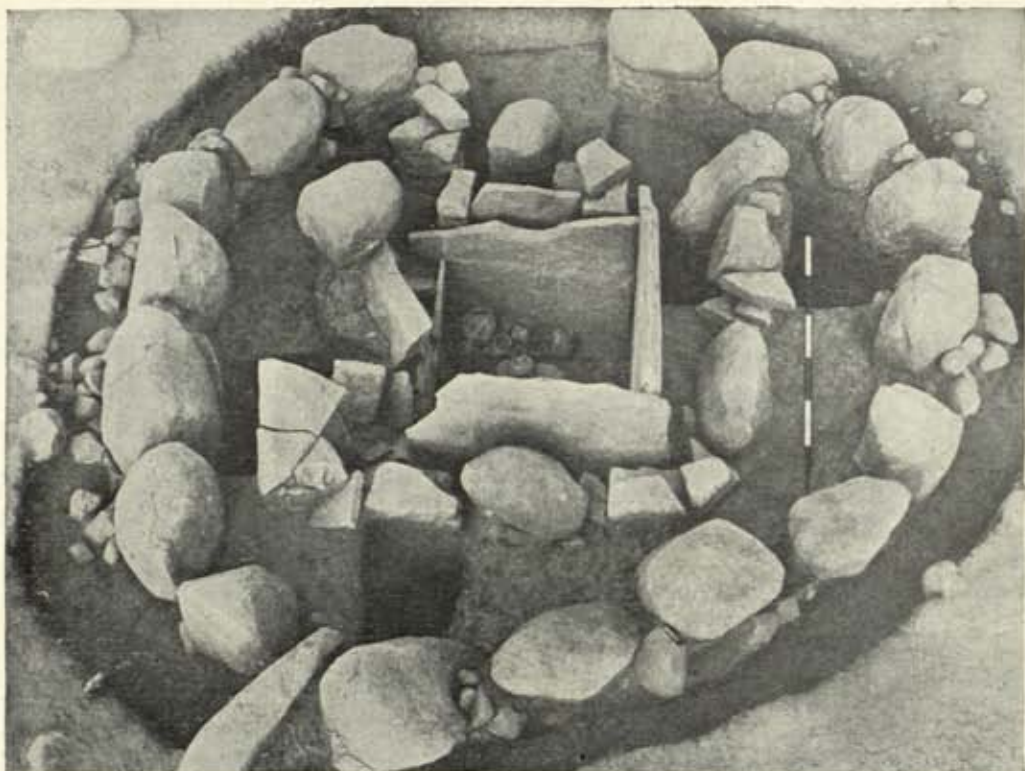


B. Brahmagiri: megalith IV



A. Brahmagiri: megalith I



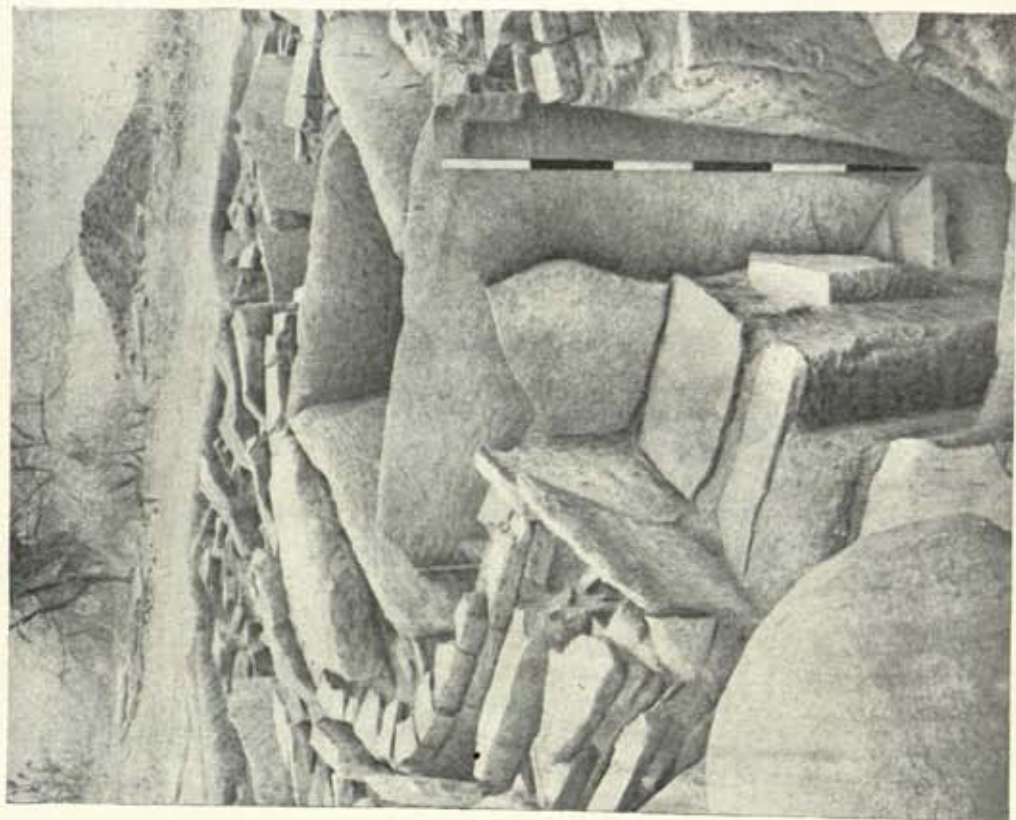


A. *Brahmagiri: megalith IV*

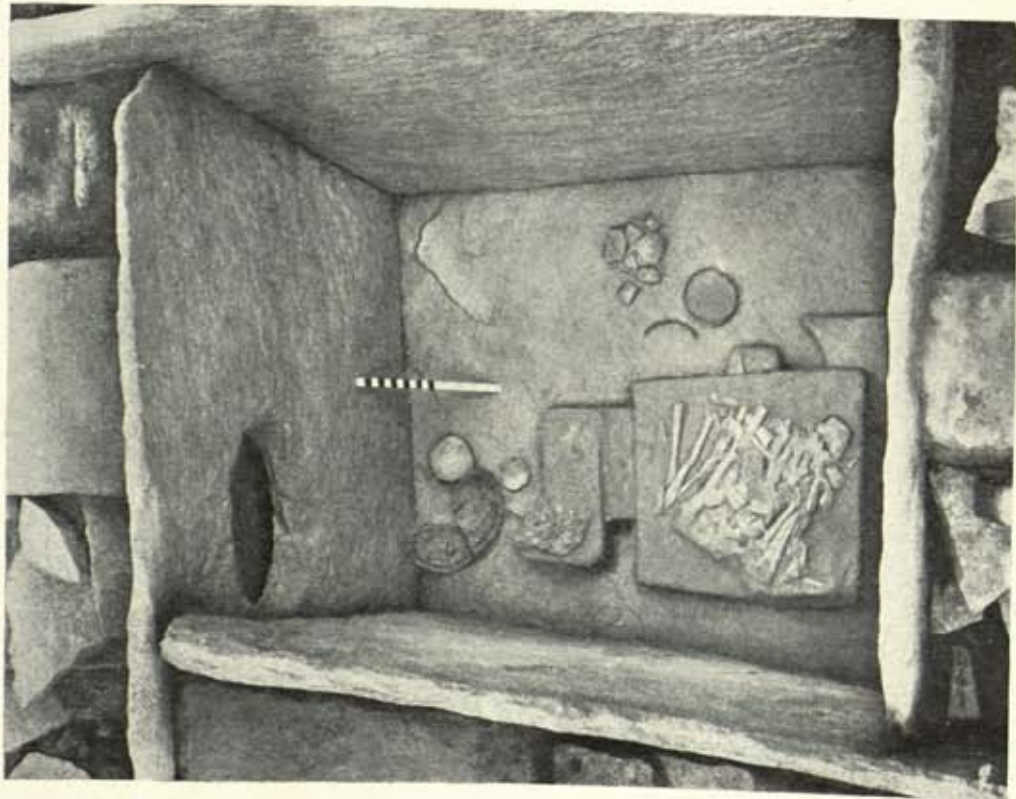


B. *Brahmagiri: megalith V*





B. Brahmagiri: megalith V, showing door-slab and paved approach after removal of walling



A. Brahmagiri: megalith V



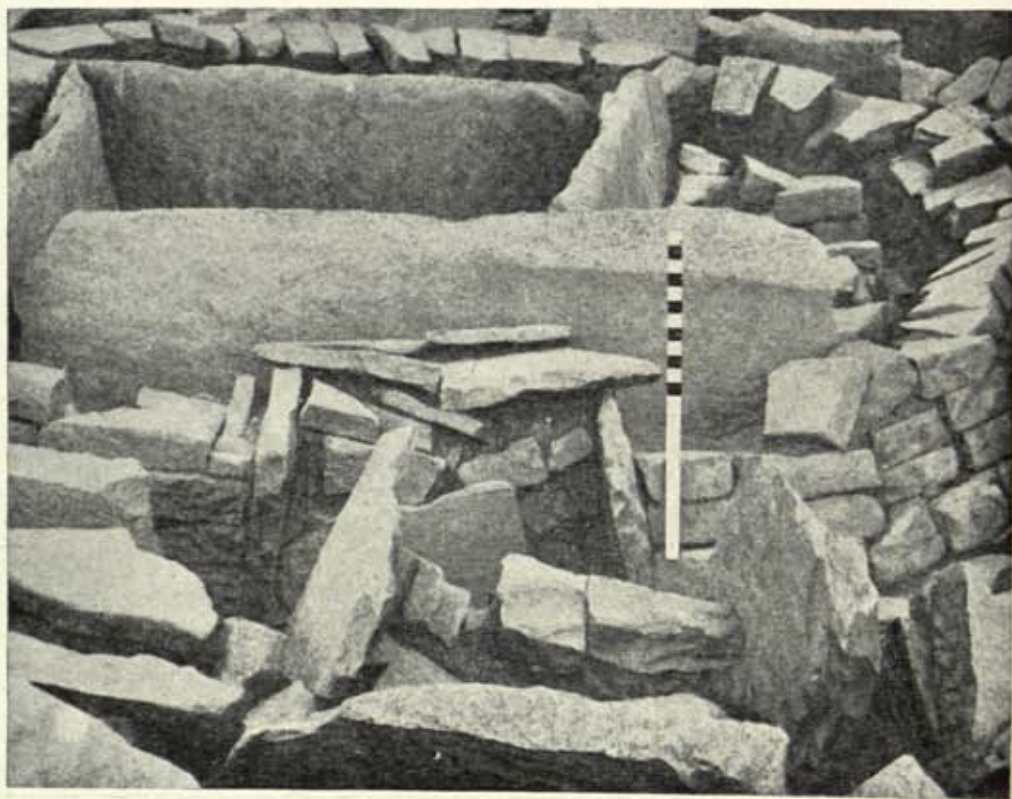


A. *Brahmagiri: megalith VI before excavation*



B. *Brahmagiri: megalith VI*



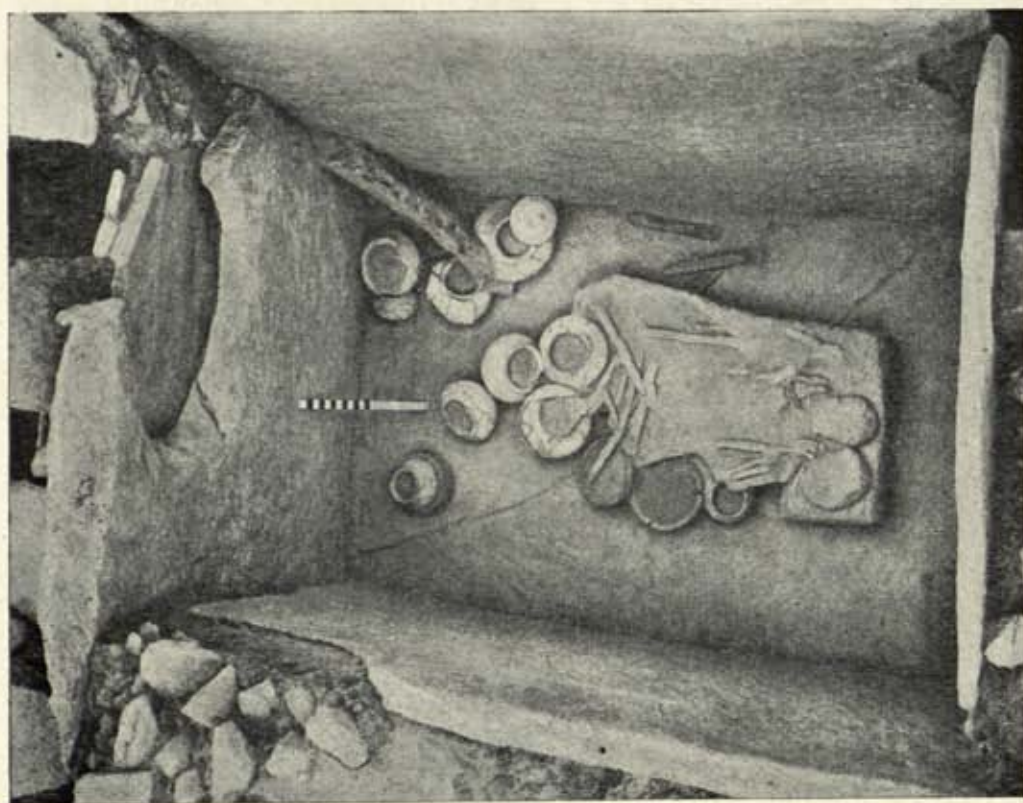


A. *Brahmagiri: megalith V, showing walled-up 'port-hole'*

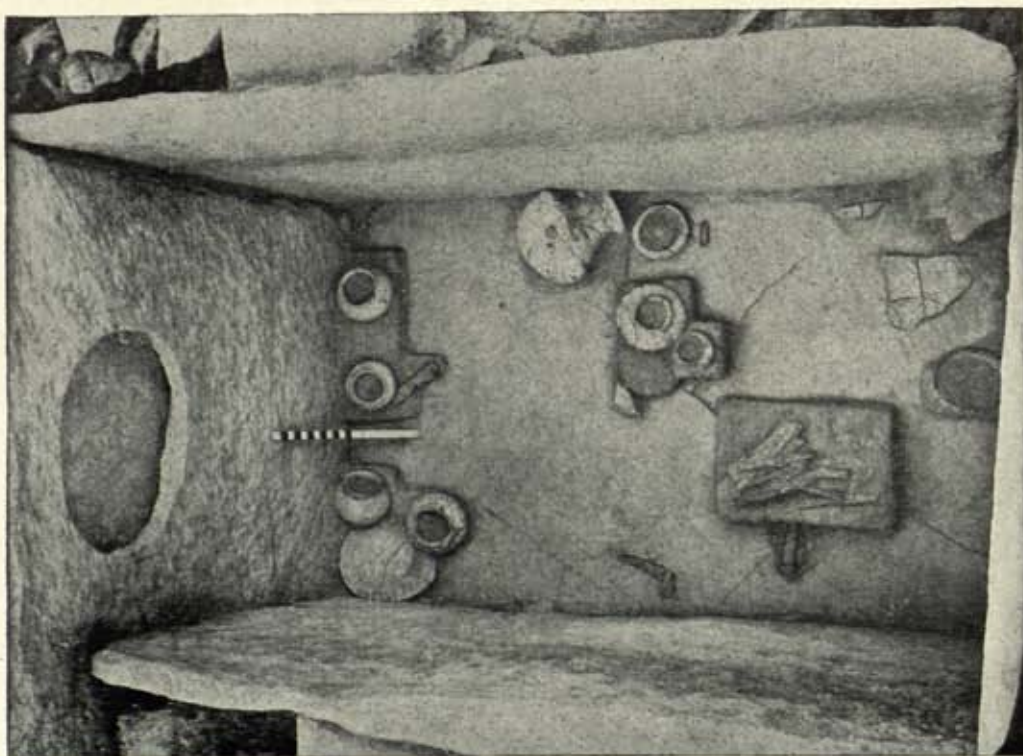


B. *Brahmagiri: megalith VIII*





B. Brahmagiri: megalith VIII

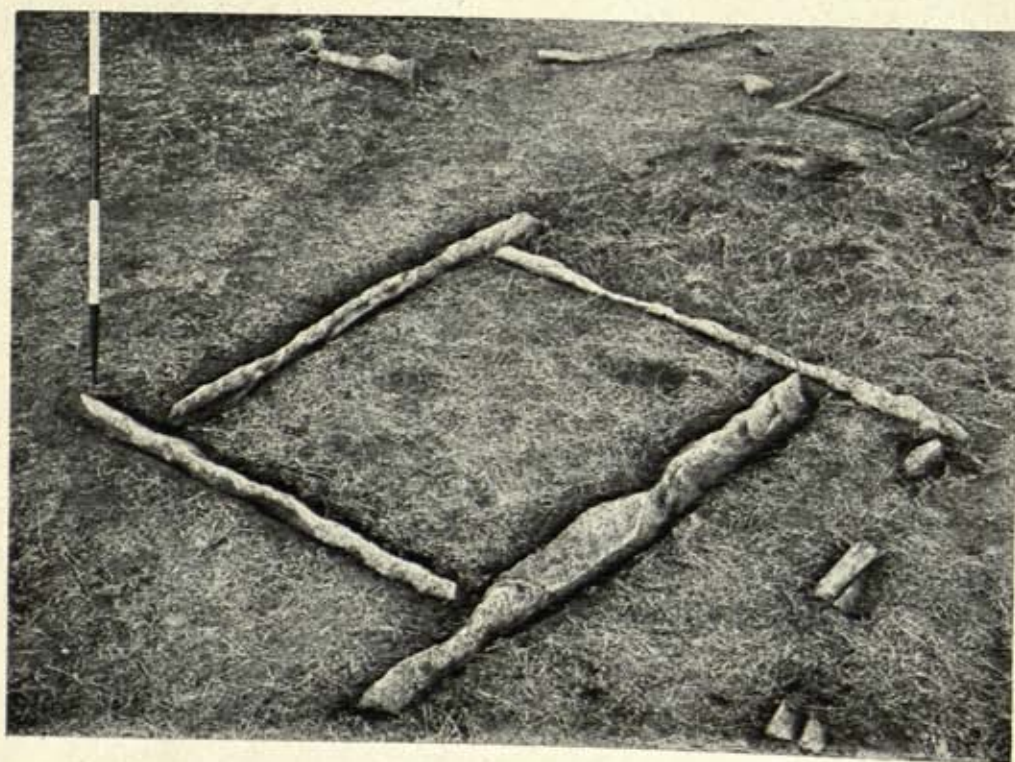


A. Brahmagiri: megalith VI





A. *Brahmagiri: entrance to megalith VIII, showing circle-stones, walls flanking passage, and double door in position*



B. *Brahmagiri : megalith X before excavation*





A. *Brahmagiri: megalith X, showing adjacent small cists*

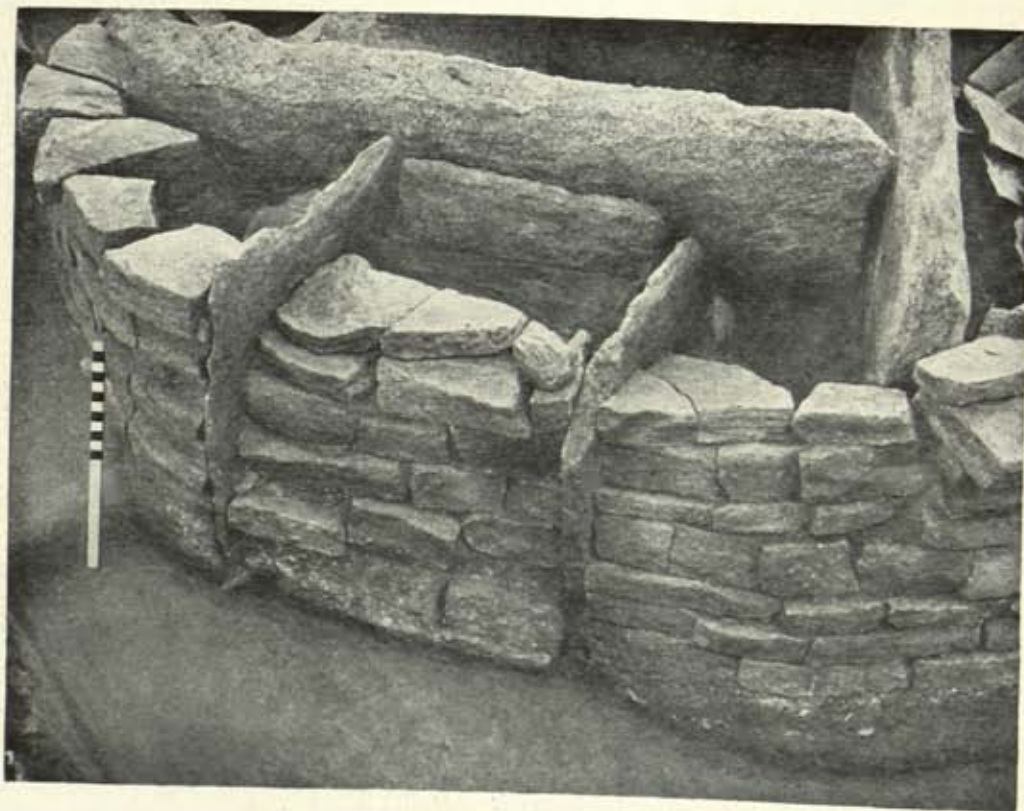


B. *Brahmagiri: megalith X*



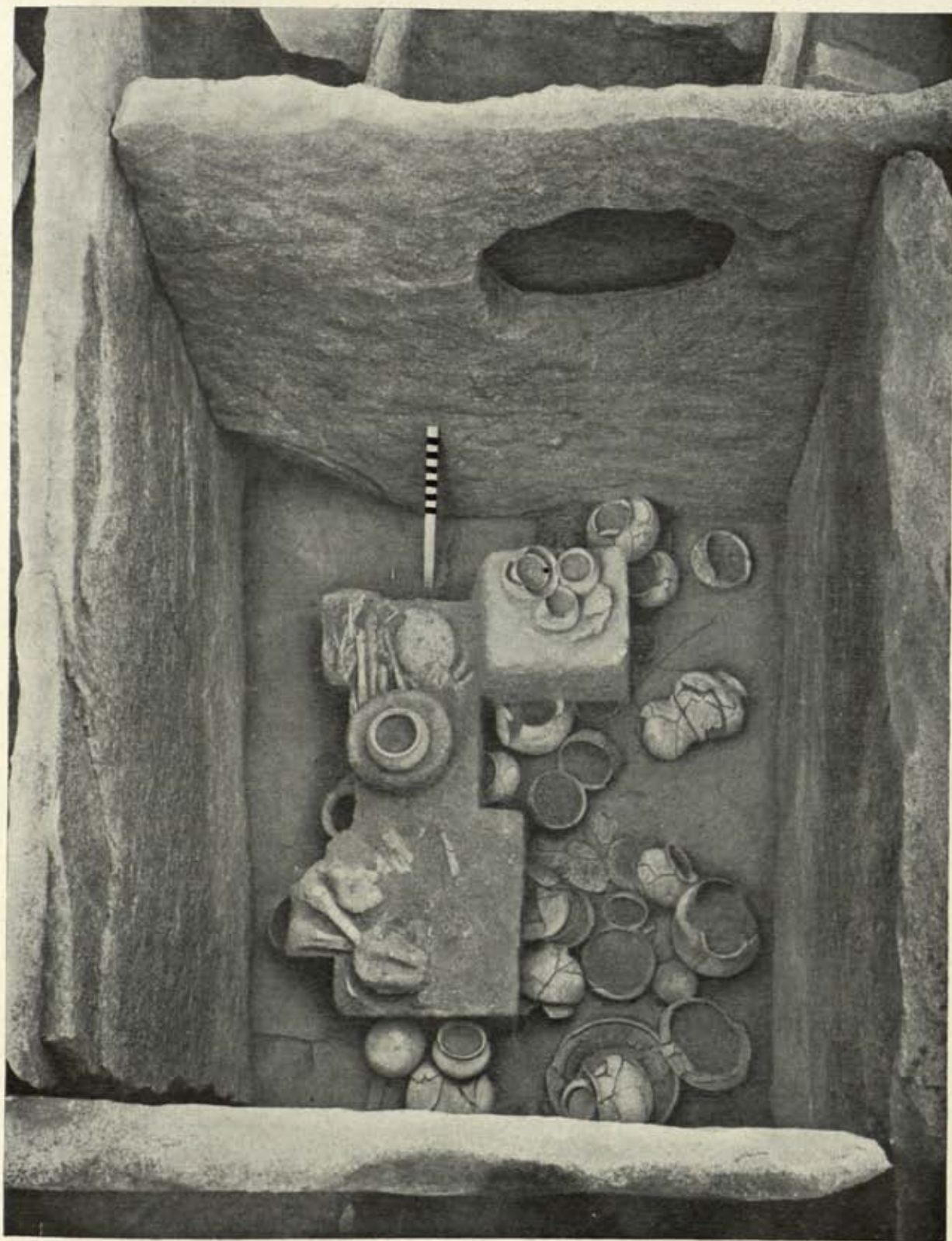


A. *Brahmagiri: megalith X, with cist Xa in foreground*



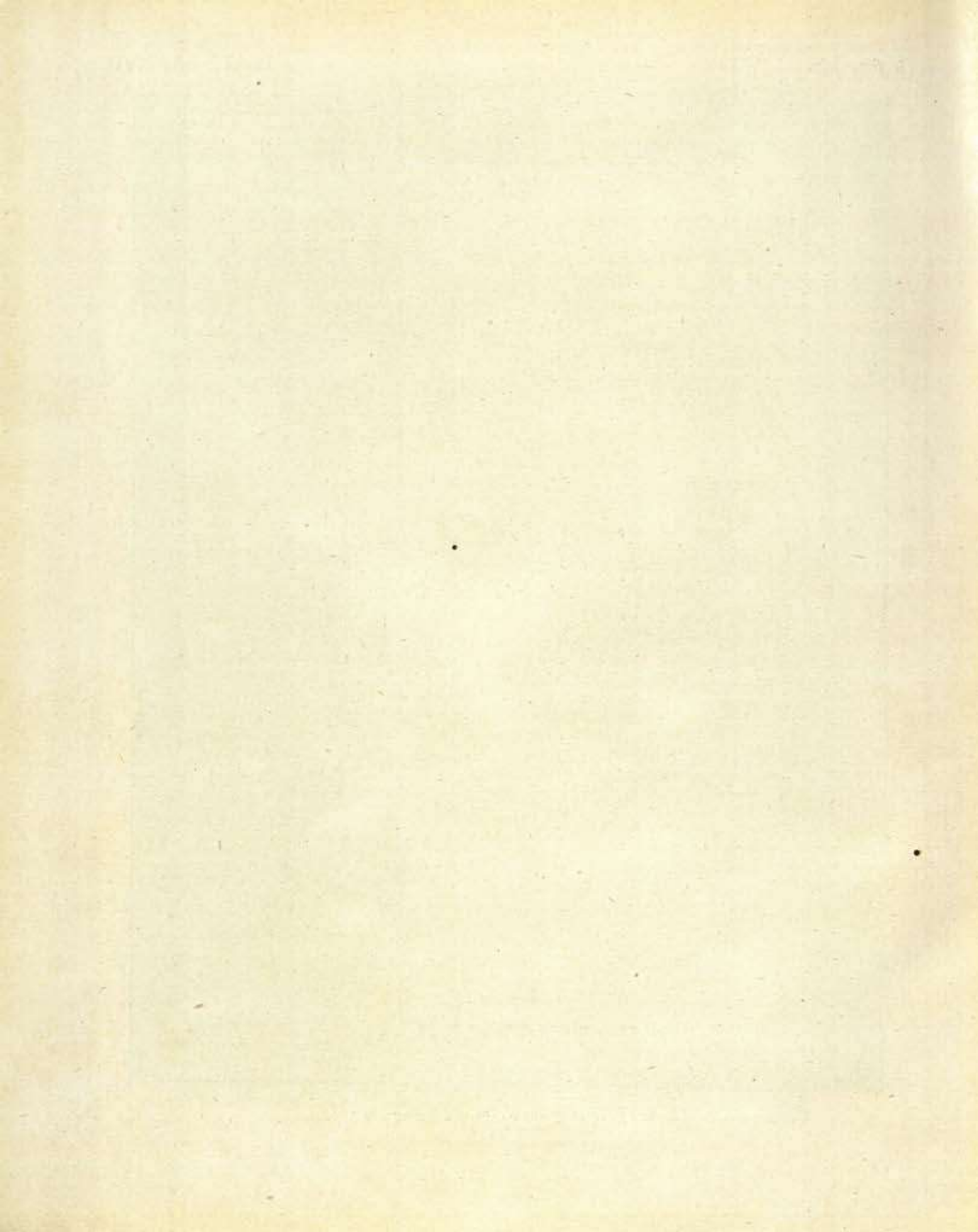
B. *Brahmagiri: walled-up entrance to megalith X*





*Brahmagiri: megalith X, showing contents of cist*







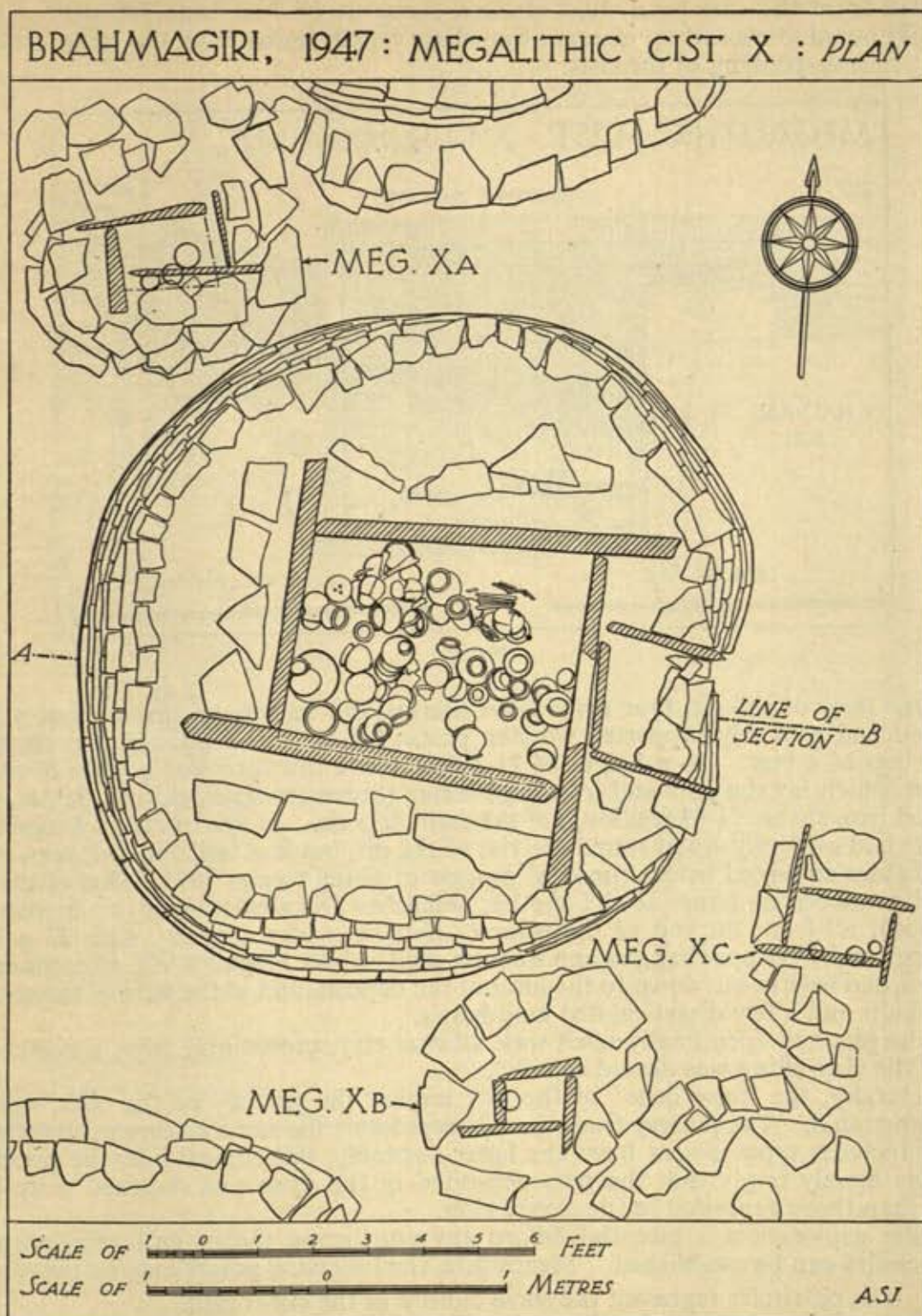


FIG. 6



approached from the east by a short shallow ramp which had been 'closed' by a non-functional door-slab backed by *chūnam*, the whole exactly resembling the ramp, functional door and *chūnam*-packing of the cists.

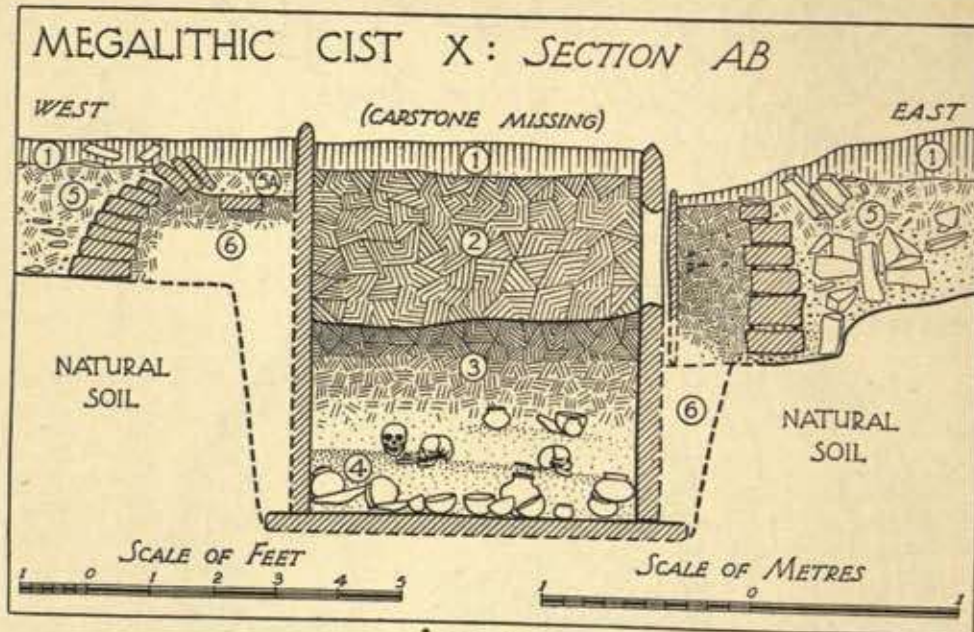


FIG. 7

On the floor of the pit, four stone slabs marked out an oblong space about 4 feet by 3 feet, and had probably supported wooden posts; below, it is suggested that these posts were the legs of a bier. To a height of  $2\frac{1}{2}$ -3 feet above the floor was a layer of earth, in and under which lay the pots and iron implements (knives, wedges, chisels, sickles, arrow-heads, and iron spears  $5\frac{1}{2}$ - $6\frac{1}{2}$  feet long) of the main deposit. In one instance (Megalith VII) other pots had evidently stood round the rim of the pit, but had fallen in and been crushed when the sides collapsed before the final process of filling (see p. 199). One of the intact pit-circles produced no bones at all; another (Megalith IX) yielded only two human bones and a tooth, all from the top of the primary deposit, where they lay with 33 gold and 2 carnelian beads, 4 copper bangles and a conch-shell; whilst Megalith VII, after the collapse of its sides, had been re-cut down to the level of the deposit, and at the base of the re-cutting lay two skulls and a few disarticulated long bones.

All the pits had been finally filled with alluvial clay, presumably from a neighbouring pond.<sup>1</sup> The clay-filling was devoid of relics.

Structurally, the 'false door' of the pits implies the priority of the cists, where the door is functional. The pottery from the pits represents the same culture as that from the cists, but includes types absent from the latter—notably, tall conical lids, the presence of which may merely imply that the pots deposited in the open pits required more careful covering than those deposited in the closed cists.

Further exploration is essential before any convincing theory as to the purpose of these pit-circles can be established. Meanwhile, the following points may be noted:—

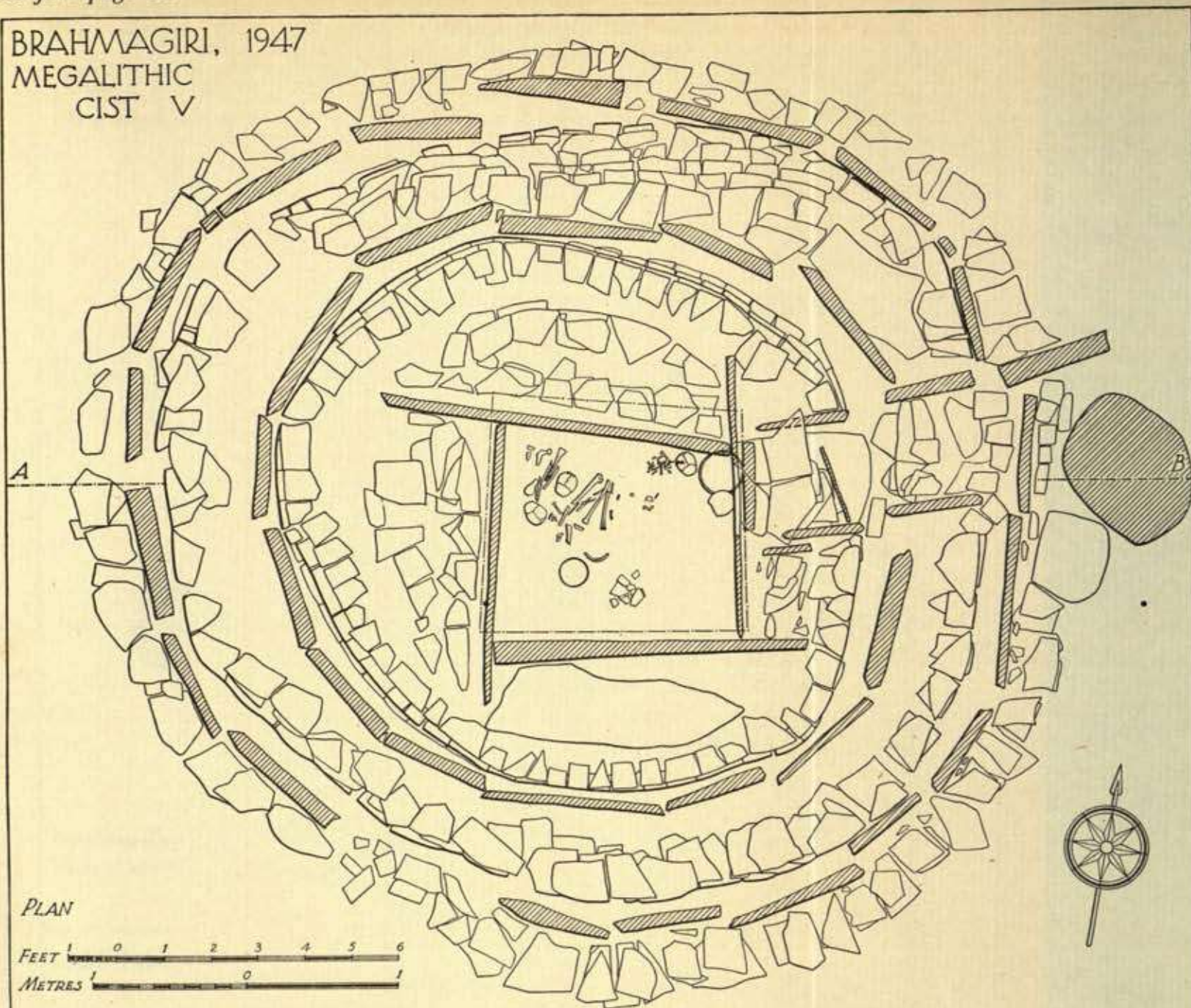
- (1) The pit-circles represent the same culture as the cist-tombs.
- (2) There is a tendency for them to nucleate amidst the cist-tombs.

<sup>1</sup> A decayed tank of unknown date still exists in the vicinity.



BRAHMAGIRI, 1947  
MEGALITHIC  
CIST V

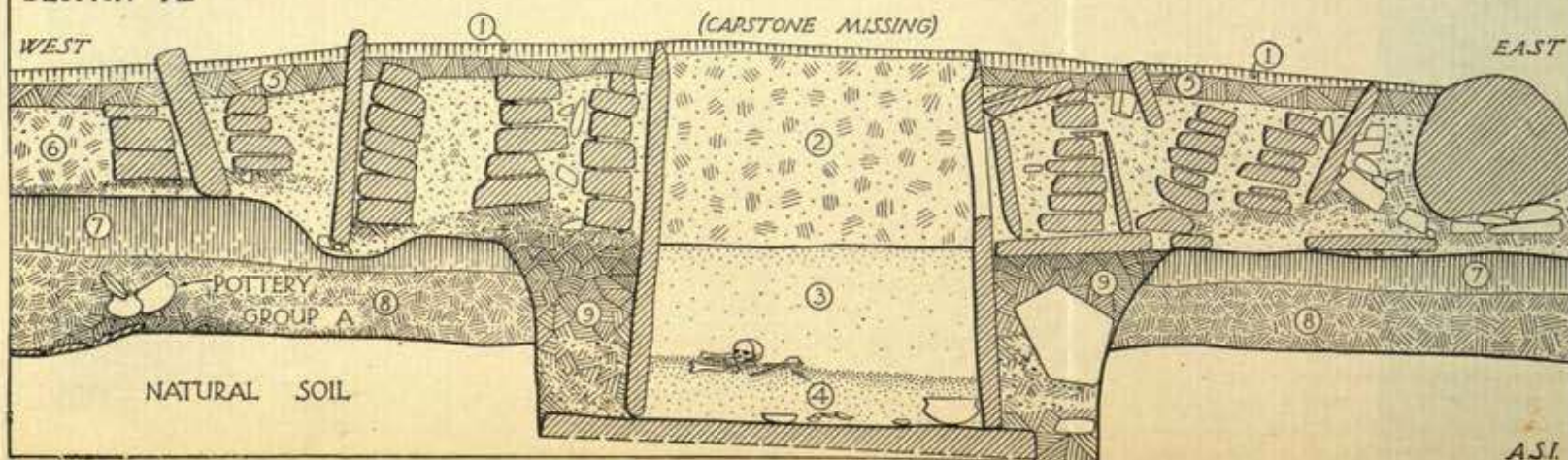
A



PLAN

FEET 1 0 1 2 3 4 5 6  
METRES 1 0 1

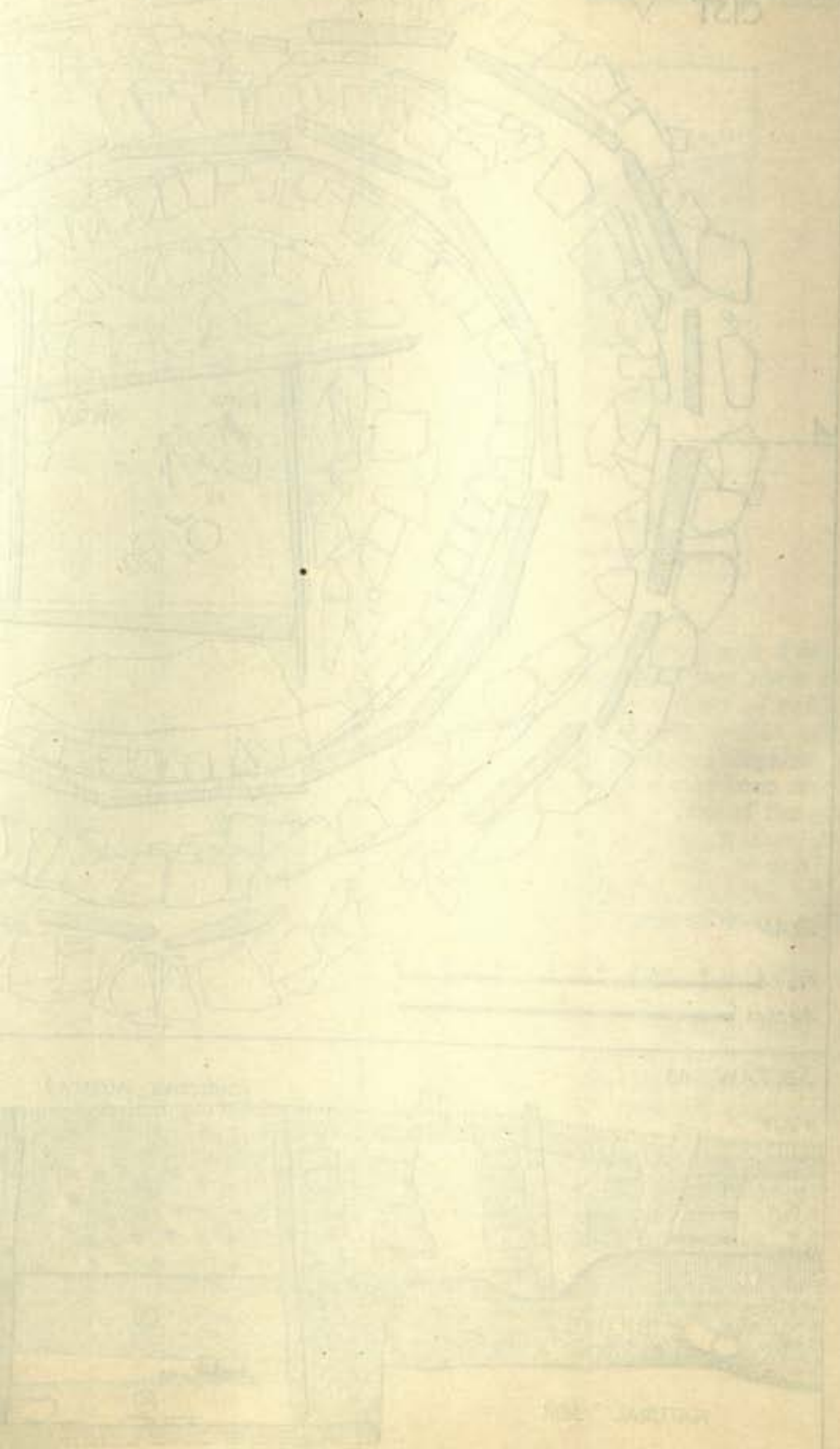
SECTION AB



ASI.



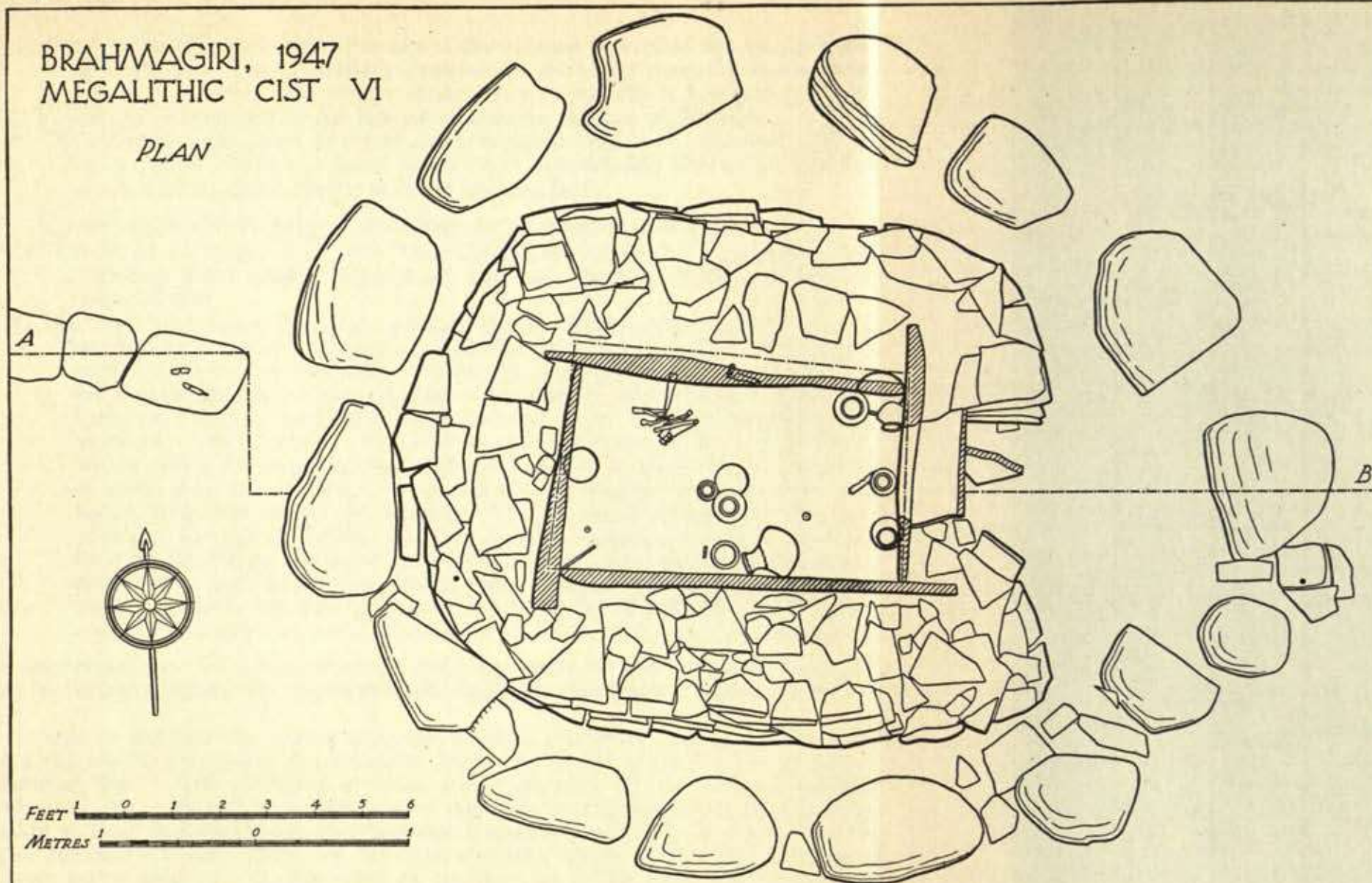
BRADY MAGN. 1911  
MEGATHIC  
CIST V



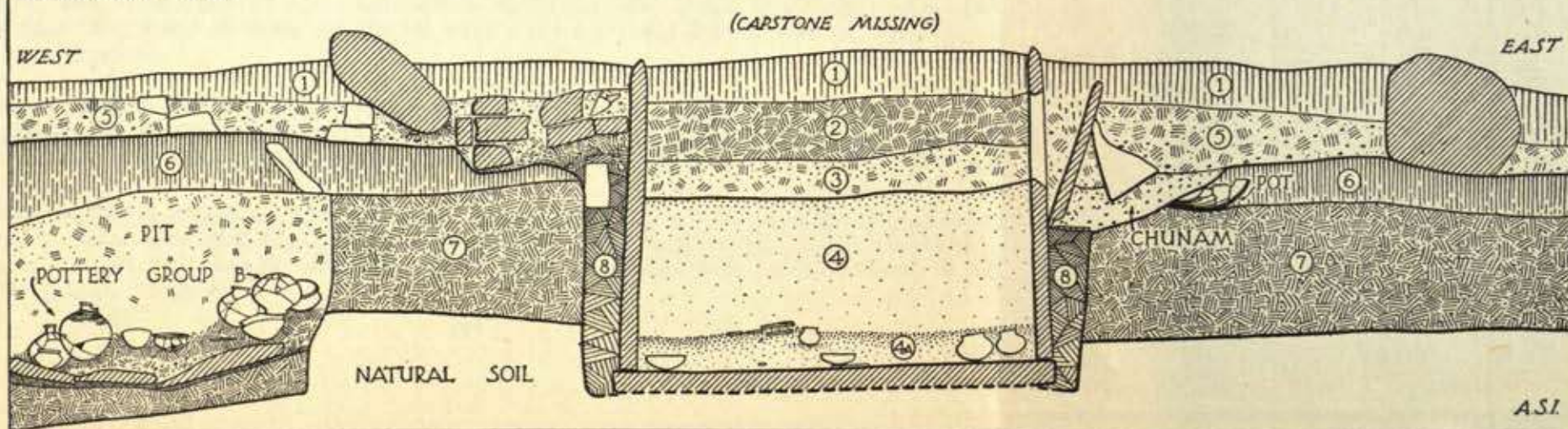


BRAHMAGIRI, 1947  
MEGALITHIC CIST VI

PLAN



SECTION AB









- (3) If human burials had been a feature of the original lay-out of the pit, all traces of them have been completely removed in one intact example, almost completely in another, and less completely in a third, where, however, a special factor is introduced by the (ancient) extensive collapse of the sides.
- (4) The funerary association of the circles is however sufficiently manifest. In two out of three of them, human bones occur immediately above the offerings at a height of about 2 feet above the original floor.

Two alternative possibilities suggest themselves on the evidence available:—

- (a) That these pit-circles may have been specialized tombs for a particular and restricted social grade. (But, if so, why the complete absence of bones in one of them?)
- (b) That they were macerating pits, in which human bodies were exposed on a bier, resembling a modern charpoy, a little less than 2 feet high, with the four corner-posts set on floor-slabs. Offerings and wind-blown or rain-washed silt accumulated up to the top-level of the bier, to which bodies were added from time to time and from which selected bones were removed for final interment in a cist-tomb. All the bones were thus removed from Megalith II, and all save a few fragments from Megalith IX, but in the latter case a number of small gold and carnelian beads and copper bangles remained where the bodies had been lying. In Megalith VII, the heavy collapse of the sides of the pit introduced a discordant factor and, although a shaft was cut down through the fall to the bones and some of these were recovered and others disturbed, a considerable number of them remained on the (supposed) bier. In this connection it may be observed that the cist of Megalith VI contained only a few long-bones, possibly owing to a similar collapse in a macerating pit.

On this second view (b), which seems on general grounds the more probable but needs checking by further digging, the pit-circles might aptly be described as 'inverted towers of silence'.

It remains to add that the nearest analogies to these pit-circles were excavated in the middle of the nineteenth century by Meadows Taylor at Jiwārji in the Gulbarga District of Hyderabad State.<sup>1</sup> His published sections are in advance of the average technical standards of his day, although they tend to show skeletons in articulation where his description makes it clear that they were disarticulated fragments, evidently in some cases the subject of secondary burial. Some of the excavated pits, which were 8 feet or more in depth, were surrounded by a double circle of boulders, as in our Megaliths III and IX. On the floor of one pit were 14 pots but no human remains. Another pit yielded parts of a human skeleton, with pottery and iron spearheads. Others included single or double megalithic cists, with more or less fragmentary skeletons both inside and outside the cists. It is evident that some of these pit-circles were used for mass-burial, but the type needs further examination.

Four monuments of this class, Megalith Nos. II, III, VII and IX, were opened this season.

*Megalith II* (pls. XC, XCVI and XCVII) consisted of a single circle of untrimmed granite blocks with three outliers which may or may not belong to the plan, the average external diameter of the circle being 26-27 feet.

<sup>1</sup> Meadows Taylor, *Megalithic Tombs and other Ancient Remains in the Deccan* (papers collected and republished by the Archaeological Department of Hyderabad State, 1941, from the *Journ. of the Bombay Br. of the Roy. As. Soc.*, III, 1851, and IV, 1852, and from the *Trans. of the Roy. Irish Academy*, XXIV, Pt. III, *Antiquities*, 1862), pp. 10 and 45.



Between and around the boulders was a considerable mass of rubble packing which did not extend to the centre and apparently represented a low stone bank or very rough wall.

Excavations revealed a central pit roughly circular on plan with an average diameter of 10 feet and a depth of 6 feet from the ancient level. The sides were approximately vertical, but a partial collapse had occurred on the western side before the final filling. At the eastern end a shallow ramp led down to the brim of the pit and contained a large flat slab of granite, which may be assumed to represent a displaced 'door-slab' (cf. Megalith VII, pl. XCIV). East of the door-slab the ramp had been filled with earth and *chūnam*.

There was no regular occupation of the site prior to the construction of this 'pit-circle', and only a few indeterminate potsherds were obtained from the ancient humus.

On the floor of the pit were four small stone slabs, laid out symmetrically to form the corners of an oblong space 4 feet by  $2\frac{1}{2}$  feet. These slabs, it is presumed, supported the legs of a bier upon which a human body or bodies were exposed. No bones, however, were found, and it has been inferred above (p. 197) that they had all been removed for final interment in some neighbouring cist. To a height of 20 inches above the floor the pit had been filled with earth (no. 4 on section, pl. XCVII), mostly collapsed from the sides, on and under which lay pots and iron objects. It is conjectured that the top of this layer represents approximately the top of the former bier. Of twenty pots, five lay at the 20-inch level while the rest lay below it. The following iron and other objects were also within the primary filling:—a tanged iron sword (fig. 39, 36); an iron object of indeterminate shape, 5 inches long and 2 inches broad; a socketed and barbed iron arrow-head (fig. 38, 27); an iron bar, 9 inches long and  $1\frac{1}{2}$  inches broad; small fragments of iron; an iron instrument of uncertain use (fig. 39, 34); a tanged iron dagger (fig. 37, 11); three iron chisels (fig. 38, 25); an iron object of indefinite shape, over  $4\frac{1}{2}$  inches long; two iron wedges (fig. 38, 21 and 24); an iron bar; an iron sickle (fig. 38, 29); a granite pestle (pl. CXVI, 12); and two terracotta spindle-whorls.

The upper filling of the pit consisted of black alluvial mud imported to the site.

Megalith III (pls. XCI and C) had previously been disturbed and consequently no useful material or stratigraphical information was obtained from it. It consisted of two closely-lying concentric circles of untrimmed granite blocks having an over-all diameter of 30 feet. Between the two circles was a mass of rubble packing which did not extend to the centre.

The central pit was roughly ovoid on plan, having the minimum and maximum diameters of  $5\frac{1}{2}$  feet and  $8\frac{1}{2}$  feet respectively, the longer diameter being east-west. It was carried down to a depth of 7 feet 10 inches below the ancient ground level. At the eastern end of the pit and leading down to its brim was a shallow lip or causeway. A large granite slab which was found fallen into the pit was presumably the 'door-slab' of this causeway and had been backed by an earth-and-*chūnam* filling (cf. Megalith VII).

Three to four inches above the floor of the pit and towards its eastern side lay five trimmed granite slabs roughly placed one over the other. The other contents comprised eighteen indeterminate fragments of iron and a few stray potsherds. The filling throughout the pit was of mixed clay, sand and earth, and the material and stratigraphical evidence combined to show that the pit had been robbed of its contents and had then been levelled up by drifts of sand and earth in the course of time.

Megalith VII (pls. XCVIII–IX) presented a comprehensive picture of a 'pit-circle' of the Brahmagiri series. It consisted of a circular wall,  $5\frac{1}{2}$ – $6\frac{1}{2}$  feet broad, consisting of a rubble core faced internally and externally with roughly trimmed granite blocks, which remain to a maximum height of three courses. The external diameter was 31 feet.

In the centre was a roughly circular pit, 12 feet in diameter and 7 feet 10 inches deep from the ancient level. Towards the eastern end was a shallow ramp or causeway leading down to the brim. The ramp was finally sealed by a double 'door-slab', backed externally by a compact *chūnam* filling (pl. XCIV).

The floor of the pit (pl. XCII B) formed a rectangular 'grave' 7 feet 4 inches by 5 feet 5 inches, with the longer axis east-west. On it were placed symmetrically four granite slabs, forming an oblong  $4\frac{1}{2}$  feet by 3 feet (pl. XCIII A). It has been suggested above that these slabs supported the legs of a bier upon which were placed human bodies for excarnation. Towards the western end of the pit was a patch, 3–4 inches thick, of ash covering an area  $4\frac{1}{2}$  feet by  $1\frac{1}{2}$  feet. On the floor were placed twenty-seven pots and the following iron objects: an iron lance (fig. 39, 32); a tanged iron knife (fig. 37, 16); an iron object of uncertain use over  $10\frac{1}{2}$  inches long; two spear-like objects 6– $6\frac{1}{2}$  feet long, with long flat pointed blade, and round shaft constricted towards the butt and ending in a knob (fig. 35); an iron wedge (fig. 38, 22); an iron sickle (fig. 38, 30); a fragment of an iron nail, about 3 inches long; a fragmentary iron chisel, over  $3\frac{1}{2}$  inches long; a thin shallow dish-like object (fig. 38, 28); and an iron bar (fig. 37, 18).





A. *Brahmagiri: megalith II before excavation*

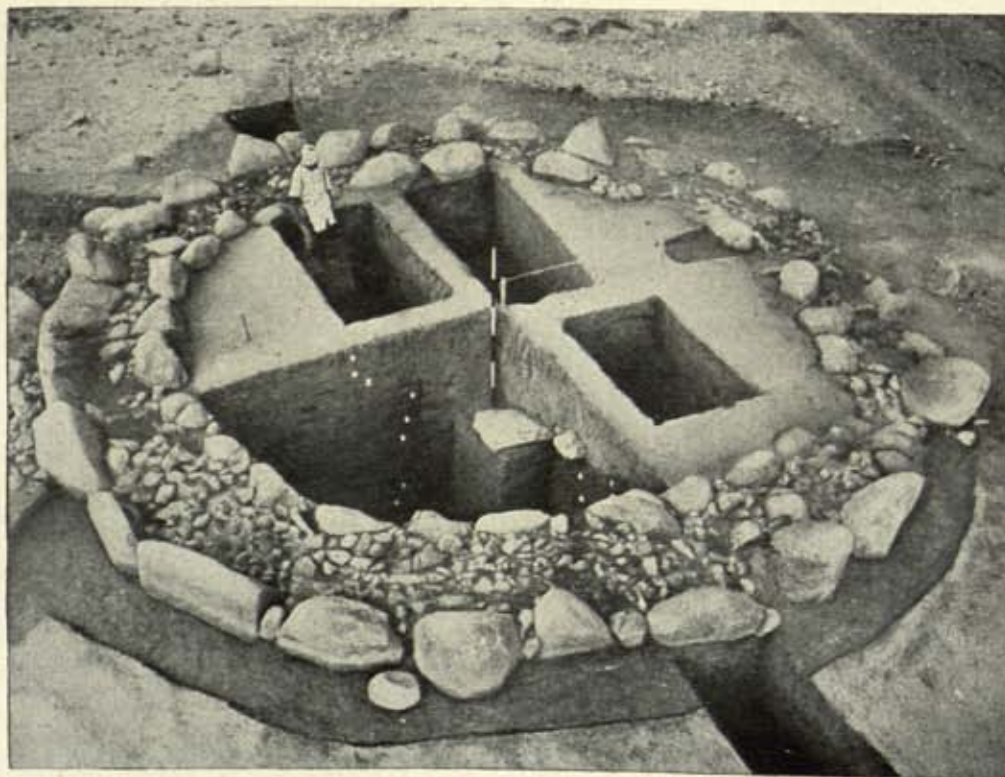


B. *Brahmagiri: megalith II (pit-circle)*





A. *Brahmagiri: megalith III before excavation*



B. *Brahmagiri: megalith III (pit-circle) during excavation*



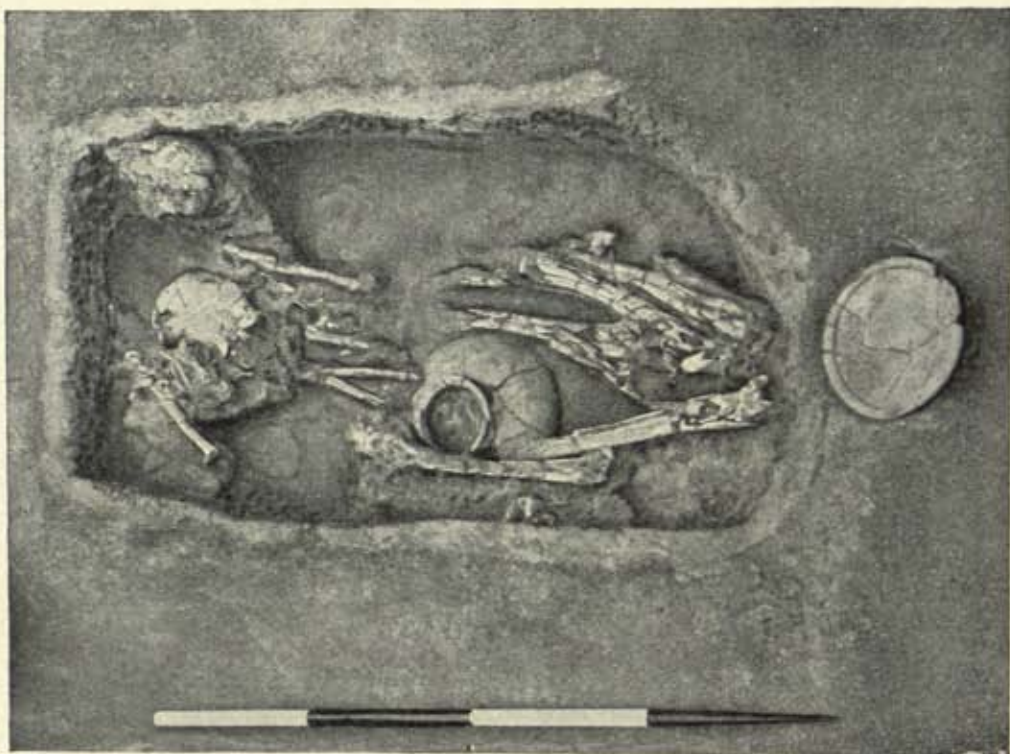


A. *Brahmagiri: megalith VII (pit-circle) during excavation*

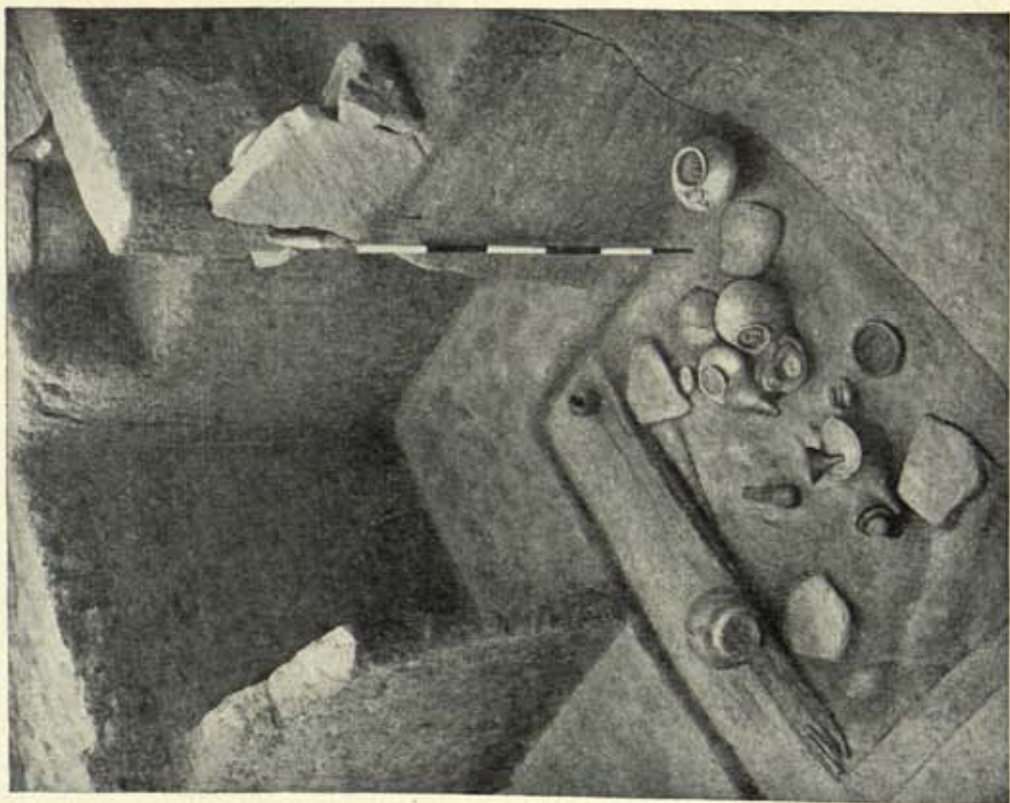


B. *Brahmagiri: pottery, ironwork and four base-stones on original floor of megalith VII*



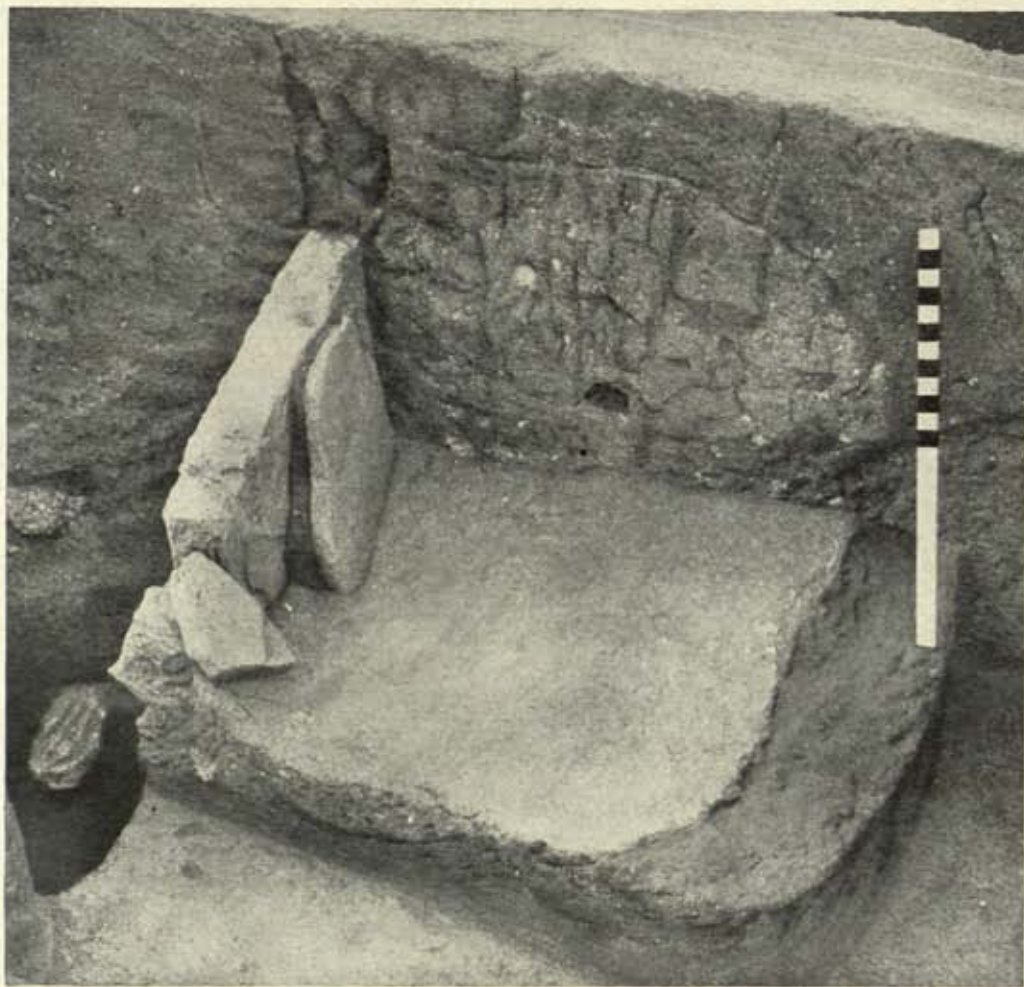


B. Brahmagiri: megalith VII, showing re-cut pit



A. Brahmagiri: megalith VII, pit-floor showing pottery, ironwork, and the four base-stones; 'door-slab,' top right





*Brahmagiri: megalith VII, showing 'door-slab' and chūnam packing*





A. *Brahmagiri: megalith IX (pit-circle), with part of (earlier) megalith III on right*



B. *Brahmagiri: megalith IX, pit-floor showing pottery and four base-stones*



The other contents, which lay within a height of 20 inches above the floor, were: twelve pots; two tanged iron daggers (fig. 37, 13-14); an iron knife-blade (fig. 37, 17); a broken iron object of indefinite shape not less than 6 inches long; a decayed iron ring (fig. 39, 35); and two fragmentary iron objects.

A layer of wind-blown and rain-washed silt had accumulated around and above these pots and iron objects. To add to this, the sides of the pit had collapsed and had covered the bier-level. This collapse brought down along with it a number of pots which must originally have been placed around the lip of the pit. A shaft was later cut through this fall to the bones, some of which were removed while two skulls and a large number of disturbed bones were left behind (pl. XCIII B). Thereafter the pit had been filled with the usual black alluvial clay, and the eastern ramp blocked in the manner stated above.

*Megalith IX* (pls. XCVII and C) was another complete example of a pit-circle. It consisted of two concentric circles of granite blocks which, with a heavy scattering of rubble between them, doubtless formed a low, roughly built wall (pl. XCV A). The over-all diameter was 20 feet.

Excavations revealed a central pit roughly circular on plan with an average diameter of 8 feet, and vertical sides descending to a depth of 6½ feet below the ancient level. On the eastern side of the pit was a shallow ramp which was subsequently blocked by a vertical granite slab backed externally by compact *chūnam* packing.

As in *Megaliths II* and *VII*, on the floor of the pit were placed symmetrically four roughly trimmed granite slabs forming an oblong 3½ feet by 3 feet (pls. XCV B and CI A), and, as in the other cases, it is postulated that these slabs supported the legs of a bier on which human bodies were exposed, the upper level of the former bier being represented by the bone-splinters, beads, etc. (see below), which are presumed to have been lying on it. On, or practically on, the floor lay thirty-one pots, around and above which had accumulated earthy deposits to a central height of 18-20 inches above the floor.<sup>1</sup> The sides of this pit also had partially fallen in. In and under the accumulation of earth were found the following iron objects: a tanged iron dagger (fig. 37, 12); a spear-like object 5½ feet long, with long flat pointed blade and round shaft constricted towards the butt, which is broken but presumably ended in a knob like those in *Megalith VII*; a small fragmentary iron object; an iron lance (fig. 39, 31); an iron wedge (fig. 38, 23); an iron bar (fig. 37, 19) two small fragmentary iron objects; a terracotta spindle whorl; and fragments of two hollow terracotta cones of indeterminate use.

At a height of 20 inches from the floor, two splinters of human bone and a tooth were obtained, the remaining bones having presumably been removed for interment elsewhere in a cist-tomb. With the bones lay one steatite, one serpentine and thirty-three gold beads, four copper bangles, and one conch-shell (pl. CI B, and pp. 266, 269).

The pit, like the others, was finally filled up with black alluvial clay, which was also spread to some extent laterally within the enclosure.

## (ii) THE BRAHMAGIRI (ISILA) TOWN-SITE

The general character of the Brahmagiri (Isila) town-site has been indicated above (p. 185). The present excavations were concentrated along the foot of the hill (pls. LXXI B and LXXII), and took the form of a series of pits dug mostly in the form of single or conjoined 20-foot squares.

### (a) Culture-sequence

The sequence of cultures revealed by these pits was as follows, from bottom to top:

- I. *The Brahmagiri Stone Axe culture*, a crude chalcolithic culture extending to a maximum height of 9 feet from the natural surface. It is subdivided into IA (earlier) and IB (later).
- II. *The Megalithic culture*, an Iron Age culture identical with that of the local megalithic tombs and pit-circles, extending to a further height of 3-4 feet.
- III. *The Andhra culture*, extending to the surface, a further height of 2½-3½ feet.

<sup>1</sup> A horizontal division in the filling at this point (cf. *Megalith II*) was not observed but may have been present.



## (b) Chronology

The three cultures, I-III, were interlocked by significant overlaps. For example, a pot-burial of the type characteristic of I was found in the lowest of the occupation-layers of II; and in diminishing quantities potsherds of I occur almost throughout the strata of II. Again, at the junction of II and III are layers containing an intermixture of the two cultures on a scale which can only imply a measure of contemporaneity.<sup>1</sup> In other words, cultures I-III represent a continuous occupation of the site through three successive phases, and can therefore be interrelated chronologically.

The fixed point in the dating of the sequence is the firm fact that the so-called Āndhra culture was flourishing in the latter half of the first century A.D. This is shown by two main pieces of evidence:—

(i) At Chandravalli (Chitaldrug), with many Sātavāhana coins five Roman denarii minted in the first half of the first century A.D. have been found on a town-site of which the major occupation represents the distinctive features here labelled the 'Āndhra Culture'. One of the coins, a denarius of Tiberius (minted c. A.D. 26-37), was found in 1947 under closely observed conditions in a layer pertaining to this culture (p. 287). Another, a coin of Augustus (minted c. 2 B.C.-A.D. 11), was found by Dr. Krishna in 1928 in 'Excavation no. 15' with yellow-painted pottery at a low, but not the lowest, level of this culture.<sup>2</sup> Whatever the precise chronological value of these Roman coins (see below, p. 287), they at least show that the Āndhra material with which they are associated cannot be earlier than the first half of the first century A.D. It may be later.

(ii) Dishes of an individual type bearing concentric rings of rouletted pattern round the interior of the base—the so-called 'rouletted ware'—form a part of the equipment of this culture at Chandravalli and at Brahmagiri. At the former site probably and at the latter site definitely, they occur down to the lowest stratum of the culture. This rouletted ware was dated in 1945 at Arikamedu (Pondicherry) by its association with imported Arretine ware of the second quarter of the first century A.D. Moreover, the very distinctive rouletted pattern, which is otherwise foreign to Indian ceramic, is characteristic of Arretine ware and was certainly derived in India from it. The Indian rouletted ware is therefore in origin unlikely to be earlier than the first or second quarter of the first century A.D.; and, if the evidence of our two sites is typical, the Āndhra culture in which it occurs there cannot itself be of earlier date. Without any large margin of error, the beginning of the culture (at these hinterland sites) may be ascribed to a date little, if at all, earlier than the middle of the first century A.D. This dating is on historical grounds sufficiently probable; the period seems to have been one in which the Sātavāhana power in Āndhradeśa was in the ascendant. (On the historical aspects, see the remarks by Dr. N. P. Chakravarti, above, p. 21.)

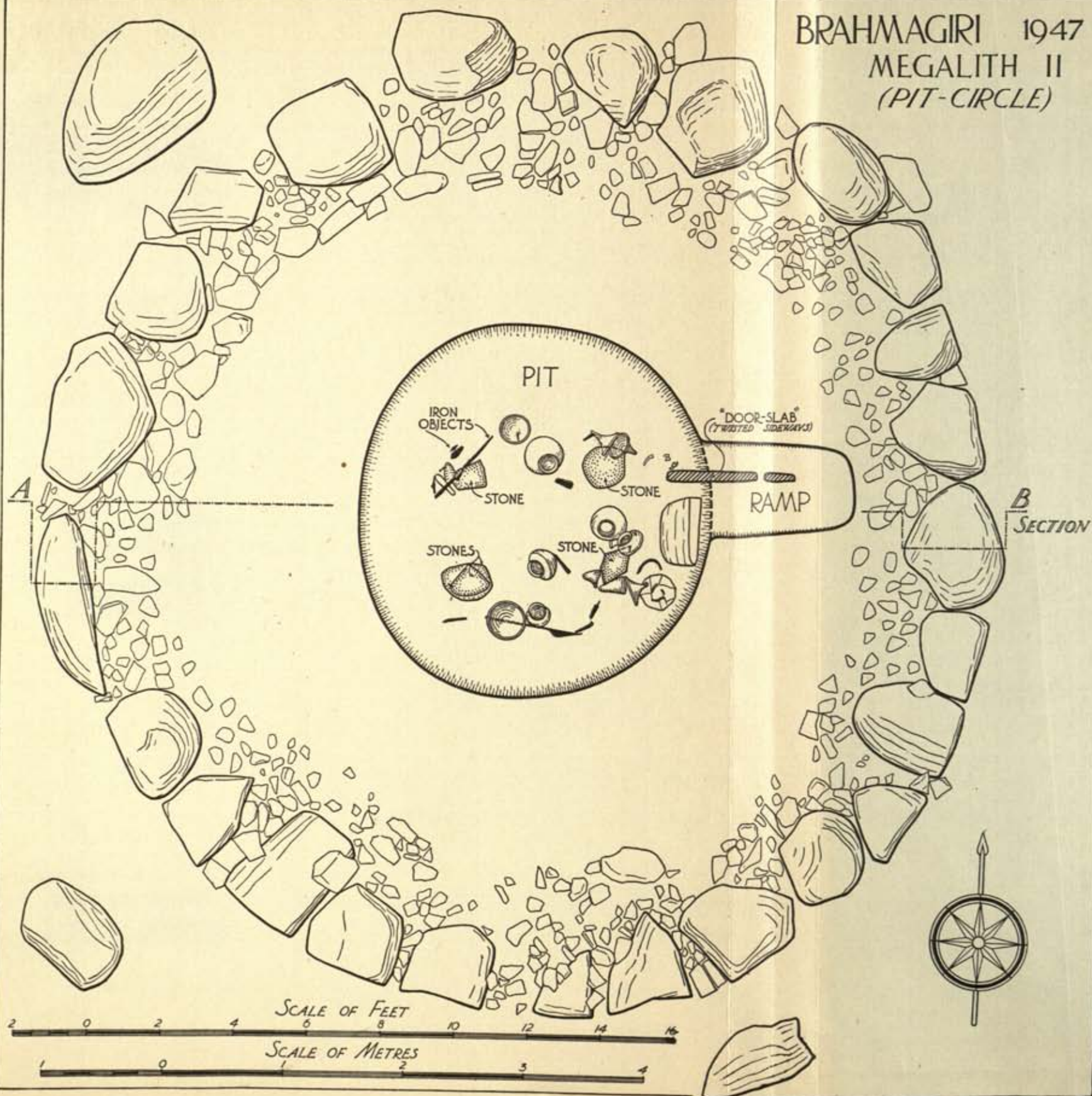
If then, as is reasonably certain, the Āndhra culture began at Brahmagiri towards the middle of the first century A.D., the local Megalithic culture ended at or near that date. How far back we should place the beginning of the latter culture is less easy to determine.

<sup>1</sup> Corroborative evidence for this overlap has recently (1947) been provided by Arikamedu (Pondicherry) where, in an excavation supplementary to that of 1945, J. M. Casal has found a variant 'Megalith' ceramic (without actual megaliths) under and overlapping the distinctive Arikamedu culture of the first century A.D. Similarly at Chandravalli, a 'Megalith' ceramic overlaps the beginning of the Āndhra culture, here ascribed to the middle of the first century A.D. (see below, p. 271).

<sup>2</sup> *Excavation at Chandravalli* (Mysore Arch. Dept., 1931), pp. 24-5. The denarius is of the type represented in *Coins of the Roman Empire in the Brit. Mus.*, I, pl. 13, 7-20.



BRAHMAGIRI 1947  
MEGALITH II  
(PIT-CIRCLE)

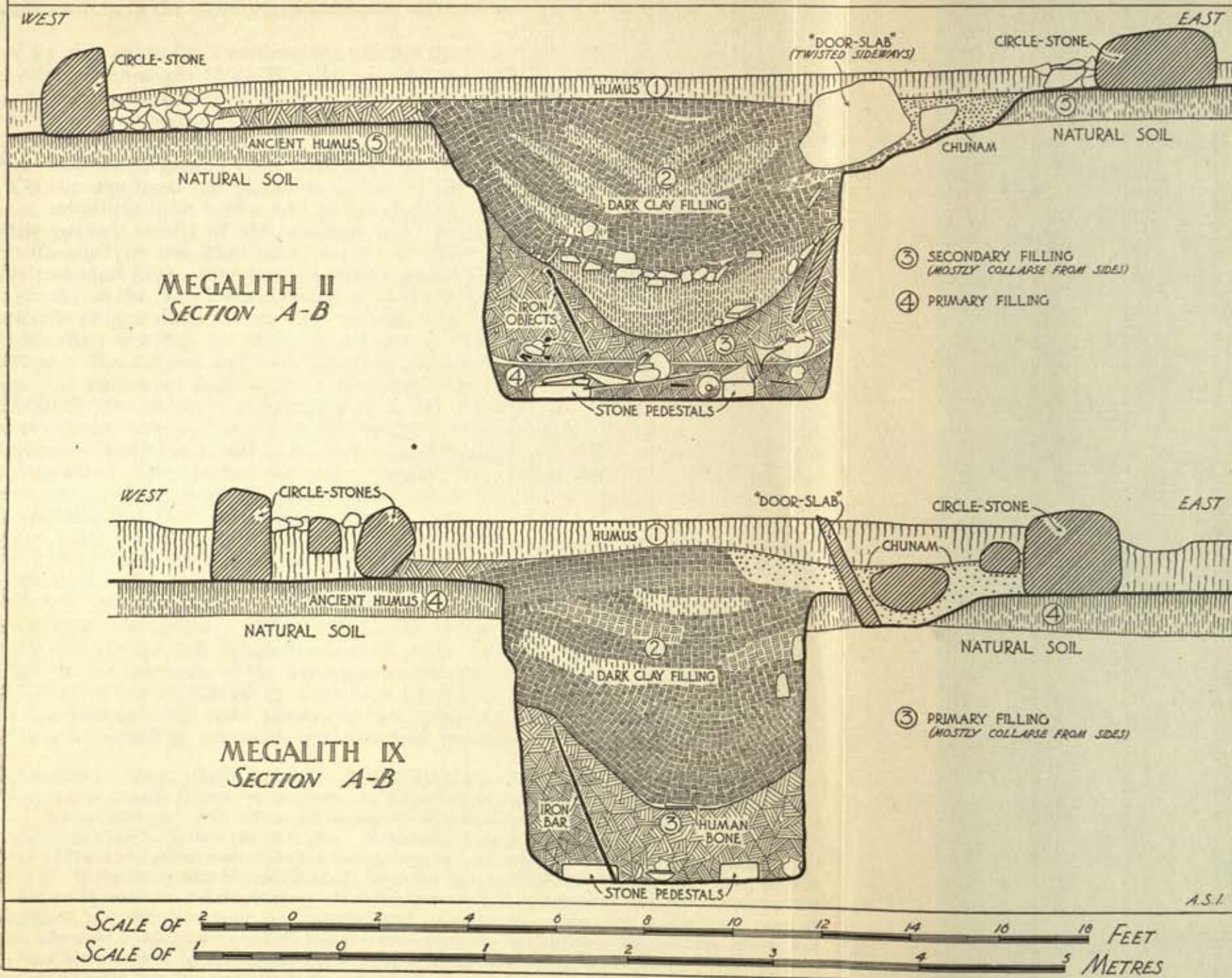








# BRAHMAGIRI, 1947: SECTIONS THROUGH PIT-CIRCLES









Our estimate depends at present upon the computed duration of the stratified accumulation of 3-4 feet of occupation-soil over a considerable area; a duration which might reasonably represent some two centuries.<sup>1</sup> This is a guess, but one which is consistent with the number of megalithic tombs in the vicinity, considered in relation to the apparent size of the ancient town.

Here we may pause for a moment to consider the historical context. The conjectured duration of the Brahmagiri Megalith culture would postulate its arrival in northern Mysore sometime in the third-second century B.C. Our knowledge of the characters of that culture and of its Stone Axe predecessor enables us to affirm that the event must have been one of some considerable magnitude; for, whilst we have recognized an *overlap* between the Stone Axes and the Megaliths, there is no cultural *transition* from the former culture to the latter. On the one hand the picture is that of a crude equipment consisting of polished stone axes, miserable little blades and points chipped from scraps of felspar and the like, hand-made pottery mostly of the roughest and coarsest kind, and practically no metal (certainly no iron); on the other hand we have a culture richly provided with iron weapons and tools (amongst them, iron bars or spears upwards of 6 feet in length), a well-made ceramic turned on the (slow) wheel, beads of gold and faience, glass bangles. It would be a pardonable exaggeration to say that between the two cultures there was little more affinity than there is today, for example, between a Nilgiri hill-station and a neighbouring Toda village. The sudden and overwhelming character of the Megalith intrusion upon the Stone Axe natives of Brahmagiri is abundantly manifest. And all that we know of megalith-distribution points to an approach from the south or south-west. Port-holed cists are not at present recorded north of the latitude of Hyderabad city (Deccan), whereas they swarm over South India, save in its most southerly tip (see p. 300). If our chronology, then, is anywhere near correct, we must suppose that in the third or second century B.C. there was a sudden extension northwards into the Deccan of a formidable iron-using, megalith-building folk from peninsular India.

Of one thing we may be certain: this invasion did not occur during the firm rule of Aśoka (c. 274-236 B.C.), within whose border-provinces, as no fewer than three local Rock-edicts indicate (above, p. 15), Brahmagiri lay. It must have occurred therefore either before 274 B.C. or after 236 B.C. But it is also unlikely to have occurred during the reign of Aśoka's father, Bindusāra (c. 297-274 B.C.), for, as Dr. Chakravarti has inferred (p. 17), it is reasonably certain that Bindusāra himself took the offensive in these parts and was responsible for the extension of the Mauryan empire into the Deccan. It might be argued that this offensive was stimulated by a previous move from the south into the same region, and that the Megalith-folk were already in fact spreading northwards about 300 B.C. If so, our two hypothetical centuries are stretched backwards in a somewhat hazardous

<sup>1</sup> Any theoretical attempt to build up a time-scale upon the depth of strata is admittedly fraught with peril. Many unknown and variable factors are involved. At Chandravalli, coins which are not, apparently, earlier than 50 B.C. or much later than A.D. 200 ranged through an accumulation of 5 feet; the period thus represented was probably in fact not more than two centuries. At Sirkap (Taxila II), the excavations of 1944-5 indicated that 6-9 feet of floors and débris were deposited during some two centuries of very intensive occupation, c. 50 B.C.-A.D. 150. In the untidy Bhīr Mound (Taxila I), 14-15 feet may, with less security, be ascribed to c. 500-150 B.C., i.e. to some 3½ centuries; but the masonry and building-methods were here of so unstable a character that the accumulation may well have been exceptionally rapid. On the site of the more rudimentary town at Brahmagiri, where the buildings were of light timber-construction, the accumulation was doubtless slower, and may even have been retarded by the intermittent wearing away of some of the loose earthen floors; but it is difficult to ascribe more than two centuries to the 3-4 feet of accumulation represented there by the main body of the Megalith culture. On the other hand, in view of the wide extent of the adjacent megalithic cemetery, an appreciably shorter period is equally unlikely.



fashion. As the evidence stands at present, I find it easier to suppose that the northward move of the Megaliths occurred later, in the chaos which followed the death of Aśoka, c. 236 B.C., when the Mauryan empire melted away and a Dark Age settled upon the Deccan for some three centuries. That Dark Age, following characteristically upon the break-up of a 'universal state', is an appropriate context for a folk-wandering which may reasonably and logically have led to a partial settlement of the Deccan in force by the Megalithic southerners.

Accordingly, I date the megaliths of Brahmagiri to the period c. 200 B.C. (or a little later)—A.D. 50. Be it noted that this provisional dating applies *only to the Brahmagiri group*, and involves the implication that elsewhere, presumably further south or west, are other port-holed cists of earlier date.

How far back behind c. 200 B.C. we should carry the beginning of the Brahmagiri Stone Axe culture, it is scarcely profitable to conjecture. At one point, low down in the accumulation, there appears to have been an interruption in the occupation (below, pl. CV A), but the extent and significance of this interruption are unknown. It does not break the continuity of the main elements of the culture, but marks the end of the painted and incised pottery which occurs in the lower sub-phase (IA). It may be suggested that the 7-9 feet of strata carry the culture as a whole back into the earlier half of the first millennium B.C., but more evidence must be awaited.

In summary, then, our chronology for the occupation of the town-site is as follows:—

- I. *Brahmagiri Stone Axe culture*: Early first millennium B.C. (?) to the beginning of the second century B.C., continuing as a dwindling sub-culture through most of the succeeding Megalith phase.
- II. *Megalithic culture*: After c. 200 B.C. to the middle of the first century A.D., overlapping the Āndhra culture.
- III. *Āndhra culture*: About the middle of the first century A.D. to the third century.

#### (c) *Main characteristics of cultures I-III*

I. The *Brahmagiri Stone Axe culture* is characterized throughout by the presence of polished pointed-butt axes of Trap rock; some of the earlier examples are distinguished by a flattened section, but a lenticular section is normal. The axes were associated with numerous crude microliths of jasper, flint, agate, common opal and rock-crystal, amongst which specialized types such as the trapeze, triangle and crescent were very rare or entirely absent (see below, p. 250).

A copper chisel found midway down in the accumulation and two small rods, one of copper and one of bronze, the latter from a fairly low stratum, indicate both a knowledge and an extreme scarcity of metal. No iron occurred in association with this culture.

The pottery was invariably hand-made, and for the most part of a coarse grey fabric. Simple globular vessels of an unvarying type were present throughout. In the lowest stratum, however, which is distinguished as sub-phase IA, were found occasional sherds of painted and incised ware. These wares were absent from the upper strata of the culture, which are classified as IB. Between IA and IB is a weathered surface (pl. CV A).

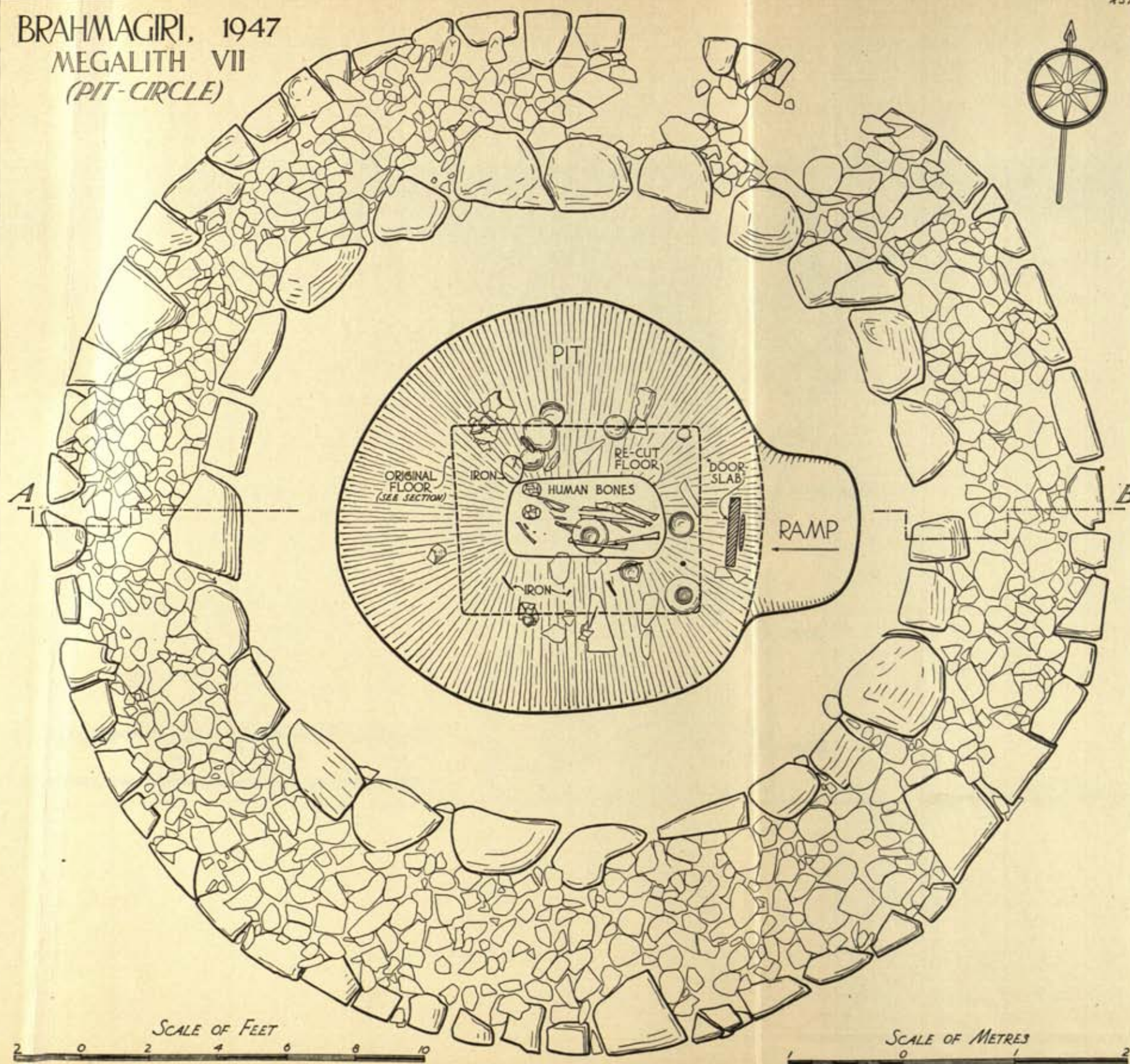
Burials were of two kinds. For infant-burials, which were numerous, large roughly made urns of uniform type (pl. CVIII) were used, the child or infant being folded up into close compass and packed into the pot.

Two other inhumation-burials were found, both extended, but only one of them (of a child 8-10 years old) could be completely uncovered (pl. CIX B). The head lay towards the east (95° magnetic); two earthen bowls were placed near the upper ends of the two femurs, and a vessel with a funnel-spout lay above the skull (see p. 229). Whether this



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BRAHMAGIRI, 1947  
MEGALITH VII  
(PIT-CIRCLE)







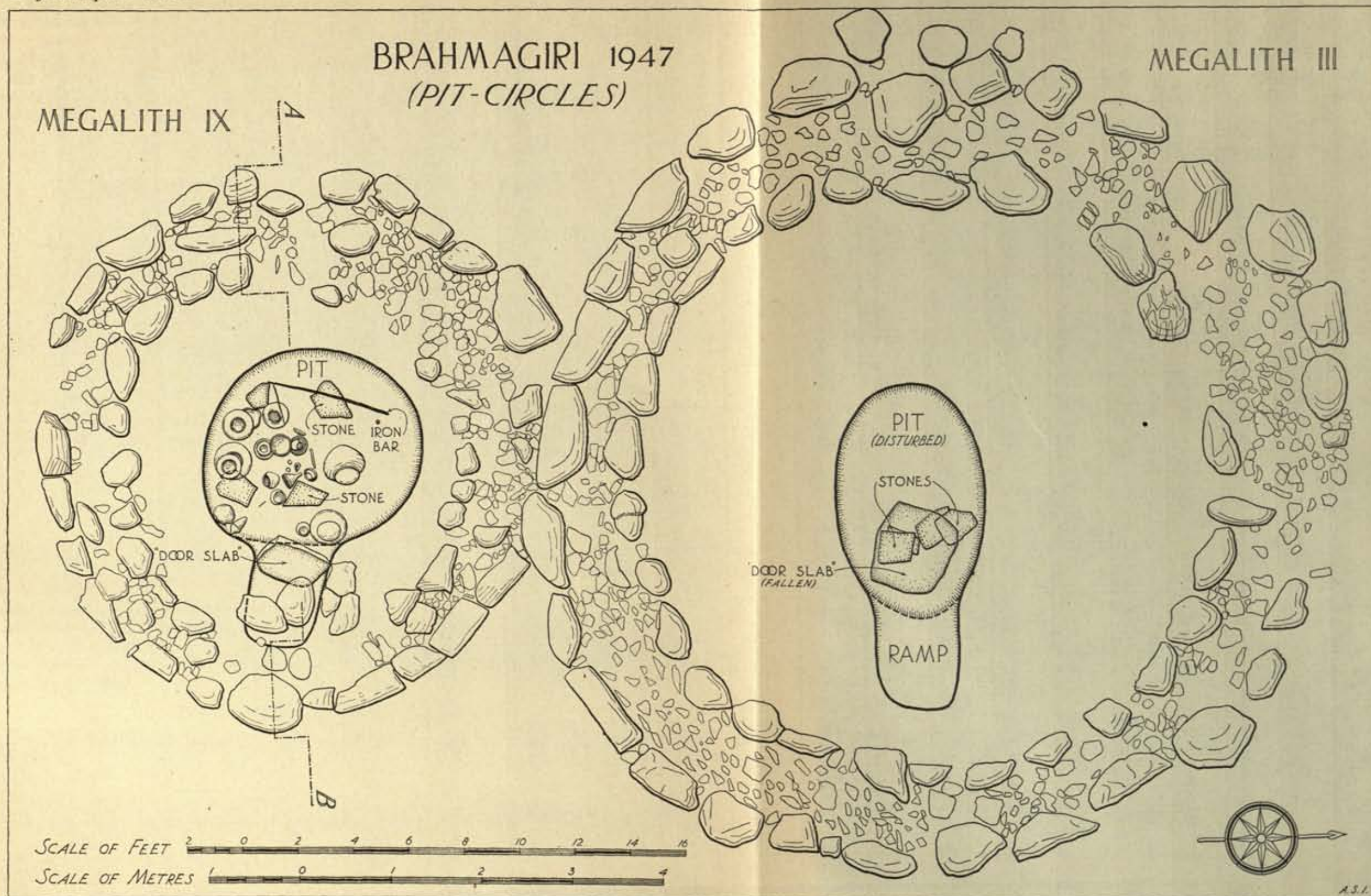








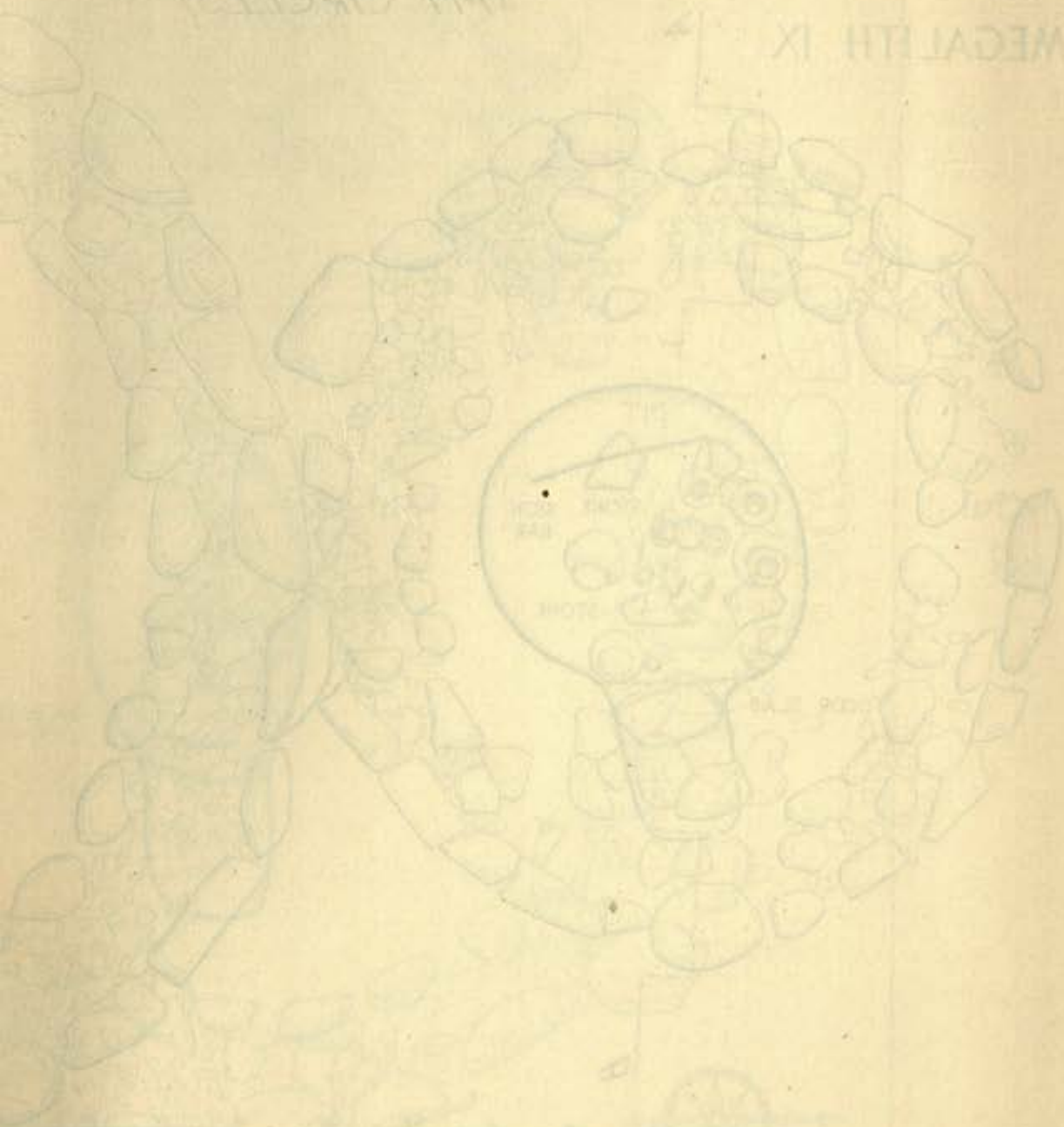






BRAHMA GIRI 1947  
(PIT-CIRCLES)

MEGALITH IX



Scale of 1 ft.  
Scale of 1 m.



vessel, with its small cylindrical funnel, was used to pour libations into the mouth or ears of the dead, as has been conjectured in the case of the funneled vessels from the Luristān graves,<sup>1</sup> cannot be guessed from an isolated example; but similar vessels in other graves of our Stone Axe culture should be looked for in future excavations.

The primary purpose of the excavation, in the limited time available, being to obtain a vertical culture-sequence with which to equate the local megaliths, no single area sufficiently large to indicate house-plans was cleared. Post-holes, however, indicated that the houses had been mostly of timber, occasionally supplemented by basic lines or low walls of rough granite blocks (pl. CIV). The occurrence of a straight line of post-holes in one of the cuttings suggested that some at least of the buildings had been of rectangular plan.

II. *The Megalith culture*, which was intrusive and first introduced iron-working to the locality, was well supplied with tools and weapons. Iron sickles, knives, swords, spears, arrow-heads and wedges were included in the cultural equipment. Polished stone axes and microliths occasionally occur at this level on the town-site but were clearly not in general use; they are presumably survivals or overlaps from the previous culture.

The pottery is distinctive in shape and fabric. It is turned on a slow wheel, polished, and is characteristically black inside and black or, more often, black and red outside, with the black confined to the upper part of the vessel and resulting from inverted firing. This polished black ware has been compared with the distinctive Northern Black Polished Ware, but the comparison is invalid (see below, p. 208).

No stone walls were found in association with this culture. Occasional post-holes indicate a continuance of timber-construction, at least for ordinary domestic buildings.

III. *The Āndhra culture* is characterized by a far more sophisticated ceramic than either of its predecessors and is normally turned on a fast wheel. Apart from the occasional occurrence of rouletted ware referred to above (p. 200), its most characteristic pottery is a range of types, sometimes apparently salt-glazed, with rectilinear decoration (notably, a criss-cross pattern) in white pigment (lime or kaolin) under a wash of russet-coloured ochre.<sup>2</sup> This type of decoration is widespread in the Deccan; it occurs, for example, in layers ascribed to the Āndhra period at Konḍāpur and Māski in Hyderabad State, and may indeed be regarded as generally characteristic of the main Āndhra period from sea to sea (see p. 308). In the south, notably in the Coimbatore District, an obviously related fabric is marked by all-over curvilinear instead of rectilinear decoration. I have not yet encountered this curvilinear variety in Āndhradeśa.

At Chandravalli (Chitaldrug), a numerous potin coinage was found with this culture. Such coins are very rare at Brahmagiri,<sup>3</sup> which at this period was evidently a relatively obscure town or village. Both at Brahmagiri and Chandravalli, glass bangles first appear in the Āndhra levels.

#### (d) *Description of the cuttings (1947)*

The individual cuttings, named Br. 17–Br. 23 (pl. LXXIII), were as follows. Burials are grouped (p. 224) for description.

##### *Site Br. 17*

Five trenches or pits, of which three measured 20 feet by 9 feet and two 20 feet square each, were laid out on this site. The natural soil was reached at an average depth of 10–11 feet below the present surface. The

<sup>1</sup> A. Godard, 'Les Bronzes du Luristan', *Ars Asiatica*, XVII (Paris, 1931), 90.

<sup>2</sup> Chemist's notes.

<sup>3</sup> None were found here during the 1947 excavations, but one had been picked up previously on the surface.



area was found to have been occupied only by the Stone Axe culture (IA and IB), save for a few Megalithic culture sherds in the uppermost levels. The copper rod referred to above (p. 202) was found in layer 11 at a depth of 5 feet 8 inches below the surface.

No remains of stone structures were found. The presence of several post-holes at various levels indicated timber structures.

Overlying the natural soil was a deposit of dark compact earth mixed with gravel, about 2 feet thick, wherein incised sherds of the IA culture were found. Above this the strata fell into four main groups, separated from one another by deposits of white alluvial clay, presumably representing clay-floors, 6 inches to 1 foot in thickness, which formed a striking feature of the site (see pl. CII). The first group was represented by a deposit of grey earth mixed with gravel and ash, 2 feet thick, containing two burial-urns (T42, p. 228, and no. 9, p. 229). The second group was represented by a series of alternating bands of yellow *kanjūr* and ash, which overlay a deposit of white alluvial clay 6-9 inches thick, wherein were two further urn-burials (T40, p. 228, and no. 7, p. 229). The third group consisted of an earthy deposit 2 to 3½ feet in thickness, containing two more urn-burials (T41, p. 228, and no. 2, p. 229). The fourth group represented the latest occupation of the site; it contained some pot-sherds akin to those from the megaliths, but also yielded two fragmentary burial-urns (nos. 1 and 3, p. 229) of the Stone Axe culture.

#### Site Br. 18

This site lay at the foot of the hill 210 yards to the south-west of the Aśokan Rock-edict. An area 20 feet square was partially excavated here to the natural soil, which was reached at a depth of 5-6½ feet below the surface. The occupation of the site was confined to the Āndhra culture. Except for a few grooved tiles set on edge, no structural remains were found.

#### Site Br. 19

This cutting, 20 feet square, was made some 20 yards to the south-west of Br. 18. It was partially carried down to the natural soil, which was met with at an average depth of 6½ feet below the surface. It was occupied during the Stone Axe and Āndhra cultures but the Megalithic culture was here omitted.

#### Site Br. 20

This site lay at the foot of the hill 100 yards to the south-west of Br. 19. The area excavated measured 20 feet by 10 feet; the natural gravel was reached at a depth of 11½ feet below the surface. As in Br. 19, the Stone Axe and Āndhra cultures alone were represented.

#### Site Br. 21 (pls. CIII-CIV, and fig. 8)

Immediately to the north-west of Dr. Krishna's 1942 excavation was laid out a trench 30 feet long and 14 feet wide. This and an adjoining cutting, Br. 22 (below p. 207), were exceptionally complete and productive; the results summarized above were obtained largely from them.

Br. 21 revealed the three main cultures in clear interrelationship (fig. 8). Layer 20 is the natural bed-rock, with an ancient overlying humus. Layer 19, which is hard black soil, yielded, in addition to the grey ware of the Stone Axe culture, an individual group of painted potsherds, here named the 'Early Painted' pottery (p. 222 and pl. CVII), which characterize the IA sub-phase of the Brahmagiri Stone Axe culture. The IB sub-phase of the culture began with layer 18 and continued uninterruptedly up to layer 8, beyond which it thinned out until it ceased after layer 6. Layer 15 yielded a group of three neoliths (pl. CV B), while layer 13 produced a copper chisel (Fig. 41, 3). Three burial-urns (T36 and T37, p. 226, and no. 1, p. 229) were also obtained from the IB levels.

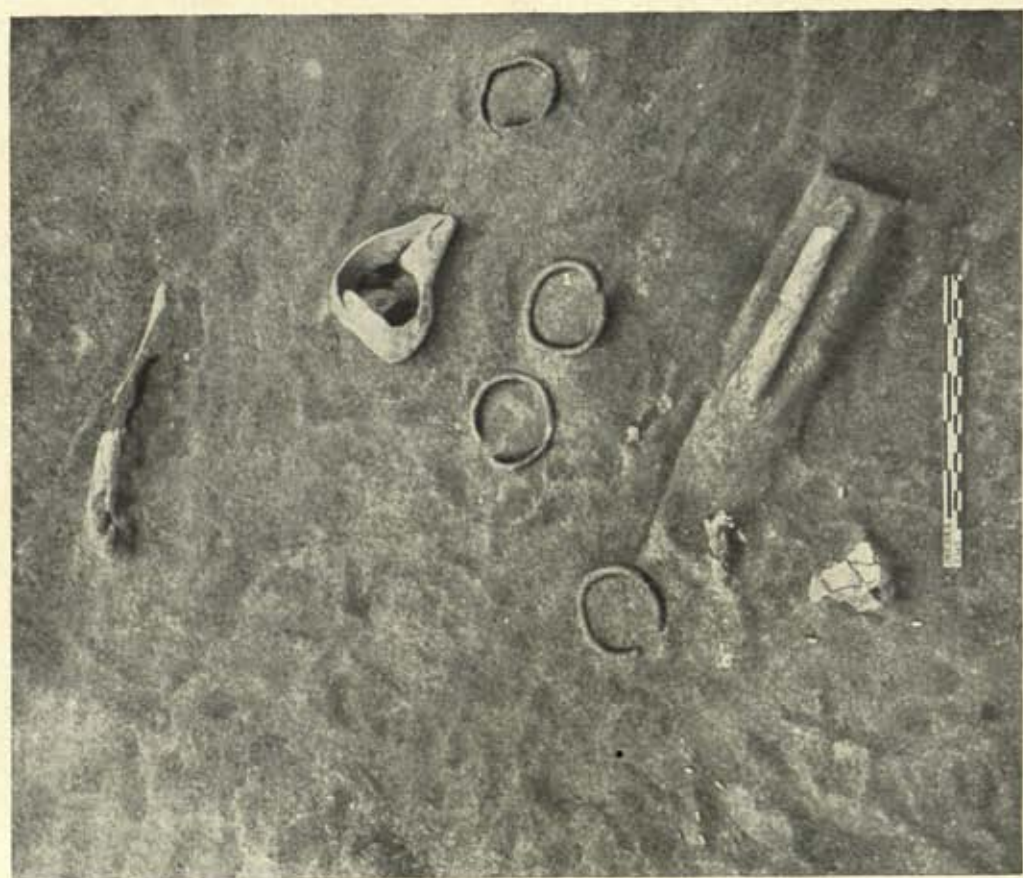
The Megalith culture, which appeared fully fledged on this site, overlapped the Stone Axe culture. It began with layer 8 and continued up to layer 4. The Āndhra culture, which in turn overlapped the Megalithic, began with layer 6 and continued through the uppermost levels of the site. Since the digging was essentially vertical and not horizontal, no plans of structures were obtained, although traces of stone-rubble foundations at three different levels in the Polished Stone Axe culture and at one in the Megalith culture were obtained.

Since this cutting produced the completest and clearest sequence of strata, it has been selected for special illustration (fig. 8, and pls. CIII-CIV), and an analytic table is subjoined (p. 206).



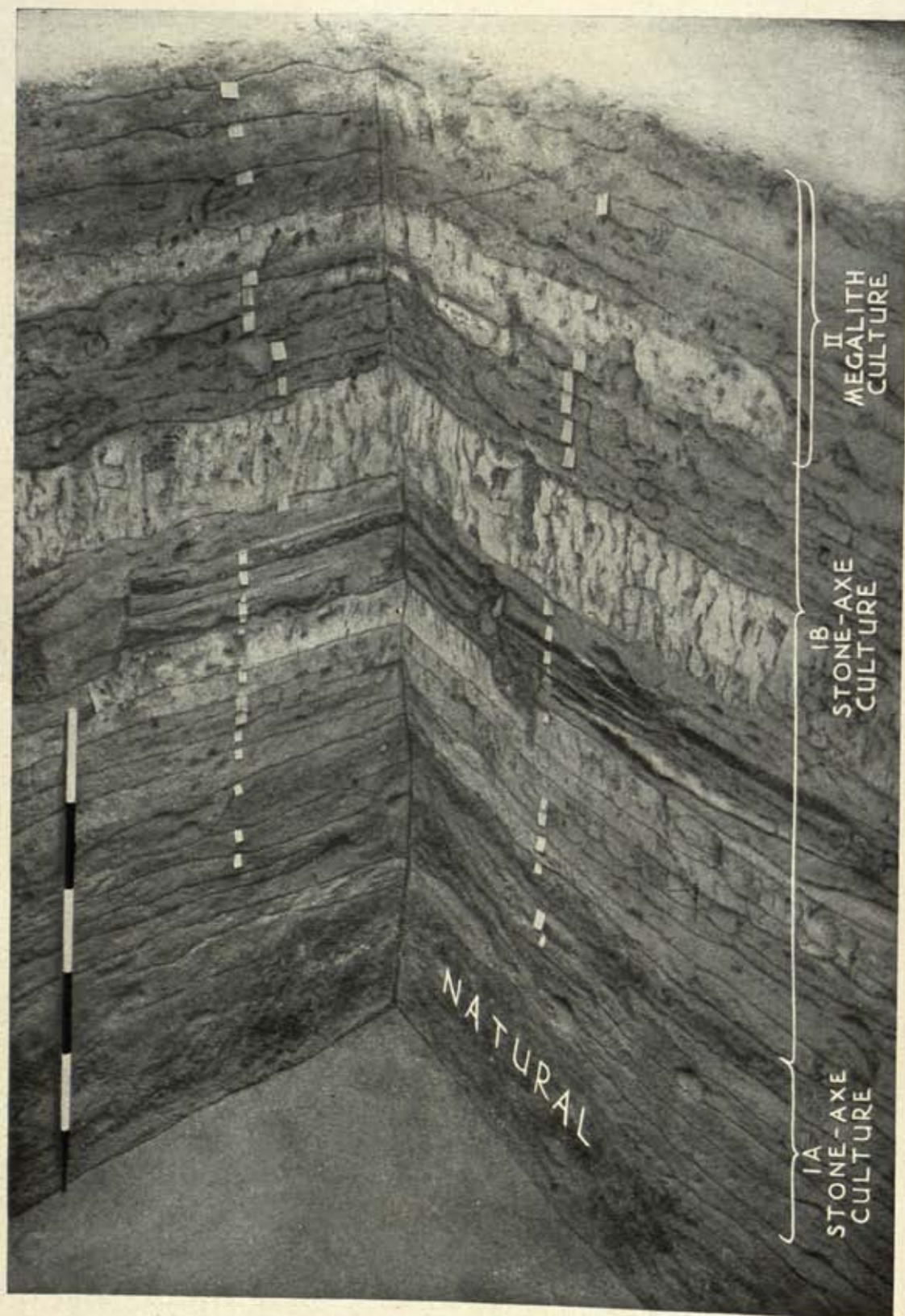


A. *Brahmagiri*: megalith IX, pit-floor showing pottery and  
four base-stones



B. *Brahmagiri*: gold beads, copper bracelets, conch-shell and human  
bones in megalith IX





*Brahmagiri: cutting Br. 17, showing incidence of cultures*





*Brahmagiri: cutting Br. 21. (Cf. fig. 8.)*





*Brahmagiri: section through the town-site, Br. 21. (Cf. fig. 8.)*



# BRAHMAGIRI, 1947: SECTION BR. 21 SHOWING INTERRELATIONSHIP OF CULTURES

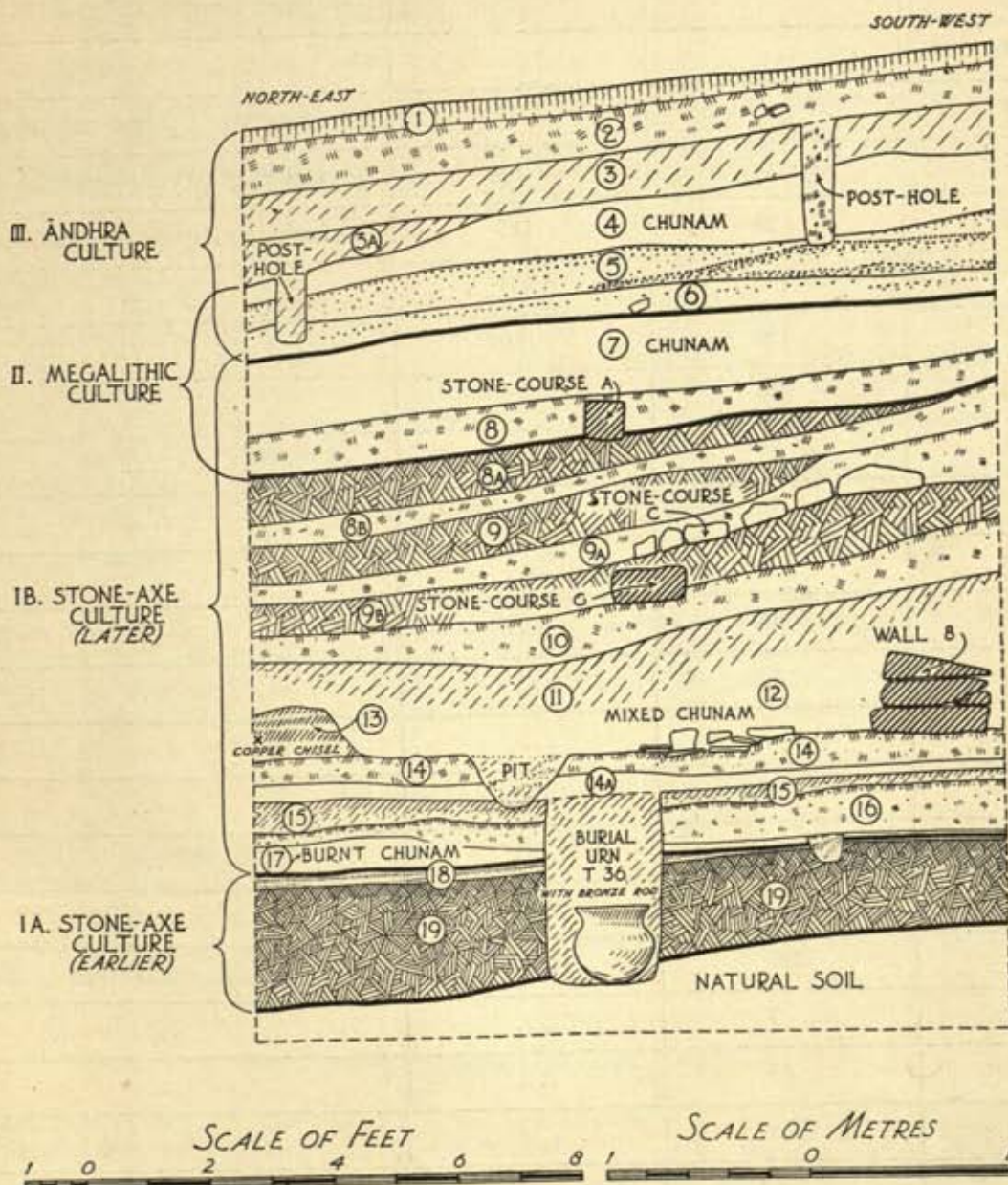


FIG. 8



Table showing the frequencies of sherds of the three cultures, layer by layer from top to bottom, in cutting Br. 21 (fig. 8)

LAYER 1	I. STONE AXE ....	II. MEGALITHIC ....	III. ĀNDHRA 52, including 1 yellow-painted sherd
2	....	....	384, including 10 yellow-painted sherds
3	....	....	480, including 68 yellow-painted and 1 rouletted sherd
3a	....	....	67
4	....	36	269, including 51 yellow-painted sherds
5	....	68	219, including 10 yellow-painted sherds <sup>1</sup>
6	26	115	405, including 7 yellow-painted sherds
7	63	407	....
8	150	199 <sup>2</sup>	....
8a	36	....	....
8b	89	....	....
9	76	....	....
9a	196	....	....
10	46	....	....
11	33	....	....
12	23	....	....
13	26	....	....
14	48	....	....
14a	15	....	....
15	198	....	....
16	7	....	....
17	45	....	....
18	25	....	....
19	321 <sup>3</sup>	....	....

<sup>1</sup> In adjacent cuttings, layers equating with 5 and 6 of Br. 21, i.e. the lowest 'Āndhra' levels, produced 7 sherds of rouletted ware.

<sup>2</sup> In an adjacent cutting, the layer equating with this contained an urn-burial of the 'Stone Axe' culture.

<sup>3</sup> Including 18 'Early Painted' and 6 incised sherds of the IA culture, which this layer represents.



*Site Br. 22*

This cutting lay 32 feet to the north-west of Br. 21. It measured 30 feet long and 14 feet wide; the natural soil was reached at an average depth of 12 feet below the surface.

As stated above, this cutting also presented a comprehensive picture of the successive cultures available at Brahmagiri. 'Early Painted' sherds typical of the IA culture were obtained from layer 15. The IB sub-phase began with layer 14 and continued up to layer 6; whilst the Megalithic culture, which overlapped the Stone Axe culture, made its appearance in layer 8 and continued up to layer 4. The Andhra culture began with layer 6 and lasted till the uppermost levels of the site.

*Sites Br. 21A and 22A*

A trench 9 feet wide was laid out between Br. 21 and Br. 22 to connect the strata of the two cuttings. The southern half of it was named 21A, the northern half 22A. The three main cultures were represented, but the only notable discovery here was that of a burial-urn (T43, p. 228) of the Stone Axe culture in an otherwise Megalithic level, further convincing evidence for the overlap of the two cultures (above, p. 200).

*Site Br. 23*

This cutting, 24 feet long and 12 feet wide with three sub-trenches, lay 64 feet to the north-west of Br. 22. The natural soil was reached at an average depth of 10½ feet below the surface. The cutting did not prove of much stratigraphical value since most of the area was covered by a series of fairly late pits. The earliest levels, however, which were undisturbed, yielded the largest number of 'Early Painted' sherds found during the work. They lay in close association with polished stone axes and Trap-rock flakes. As a whole, the Stone Axe culture was fairly well represented, but the occupation here in the Megalithic period was slight. On the other hand, the Andhra culture was fully represented.

An incidental discovery of interest was that of a road of stone rubble (pl. LXXII B), 17-18 feet wide, in the latest level of the site. It was terraced at intervals to conform with the slope.

*Sites Br. 16A and Br. 16B*

In his 1942 excavation on a site then named Br. 16, Dr. Krishna had reached the natural soil only in a limited area. Accordingly, in 1947, the Mysore Archaeological Department, working with the Archaeological Survey, did some further clearance in the western part of the same cutting, naming these clearances Br. 16A and Br. 16B. The natural soil was reached at an average depth of 14 feet below the surface. Four burial-urns (T38 and T39, p. 226, and nos. 3 and 4, p. 229), of the Stone Axe culture were obtained.

### (iii) THE POTTERY FROM BRAHMAGIRI

As in the description of the sites, so in that of the pottery, the evidence of the megalithic structures will be dealt with first, since it is upon the Megalith culture that the present investigation is focussed. Subsequently the ceramic material from the town-site will be considered in its stratigraphical sequence, and the Megalith sherds found there will take their proper chronological place.

#### (e) *Pottery from the cists and pit-circles*<sup>1</sup>

A general survey of the pottery from the cists and pit-circles at Brahmagiri reveals the cultural unity of the two classes of monuments. The black-and-red technique and the polished surface, normal characteristics of megalithic pottery in India, are common to both, as are certain of the ceramic types, notably Types P13 and C13, P14 and C14, P19 and C19 and variations of P20 and C20.

<sup>1</sup> This and the following sections on the pottery have been prepared mainly by Mr. S. C. Chandra.



On the other hand, it must be noted that a number of types are peculiar to the one or the other class. Thus the following types present in the cists are absent from the pits: Types C1-C12, C15-C18 and C21-C30. Likewise, the following types present in the pits are absent from the cists: Types P1-P12, P15-P18 and P21.

Funnel-shaped lids in black ware, tulip-shaped vases both in black and black-and-red, lipped bowls, cups-on-stand and the big narrow-mouthed jars with pointed bases are the striking and peculiar types from the pit-circles, while small double-knobbed lids and three-legged vases in dull red ware are equally peculiar to the cists. Fillets of cord-like impressions on the rim are peculiar to the big pots from the pit-circles. On the other hand, incised herring-bone patterns are common to the red-ware vases from both, though more frequent in the pit-circles than in the cists. From the chronological standpoint, however, this partial differentiation between the ceramic types of the cists and those of the pit-circles is discounted by the evidence of the town-site. There, types peculiar to the cists—C2, C5, C7 and C18—occur in the same occupation-layer as types peculiar to the pit-circles—P1, P3, P10, P11 and P21. The differentiation noted above is therefore one of usage, not of chronology. It has been suggested (p. 196) that the exposure of pots containing offerings in or beside the open pits induced the employment of certain types (notably, heavy lids) not required in the closed pits, and there are doubtless other factors which cannot now be inferred.

The black-and-red ware (pl. CVI)<sup>1</sup> from the megaliths is generally fine, well baked, and brightly polished. The clay used gives a fine paste, and sand, quartz, husk or other tempering material is very sparingly used. The pots are wheel-turned, seemingly on a slow wheel. The black polished ware, distinctive of the pit-circles, seems to have been fired at a low temperature<sup>2</sup> as it weathers much sooner than the red. This black ware of the megalithic sites of South India and the Deccan has been compared to the typical black polished ware well known from northern Indian sites,<sup>3</sup> but it should be stressed that the two wares are readily distinguishable. The northern black ware has a fine fabric, is very well fired, has a polish giving almost a metallic lustre, and is shaped on a fast wheel; while the black megalithic ware is coarser, less well fired, usually not so highly polished and is normally potted on a slow wheel.<sup>4</sup> The dull terracotta red ware, usually with a pale drab slip, burnished in a few cases, is common both to the cists and to the pit-circles, though more frequent in the former than in the latter.

The Megalith pottery is usually plain and utilitarian in character. Decoration, when present, is simple and primitive, the commonest being bands or fillets of cord-like impressions

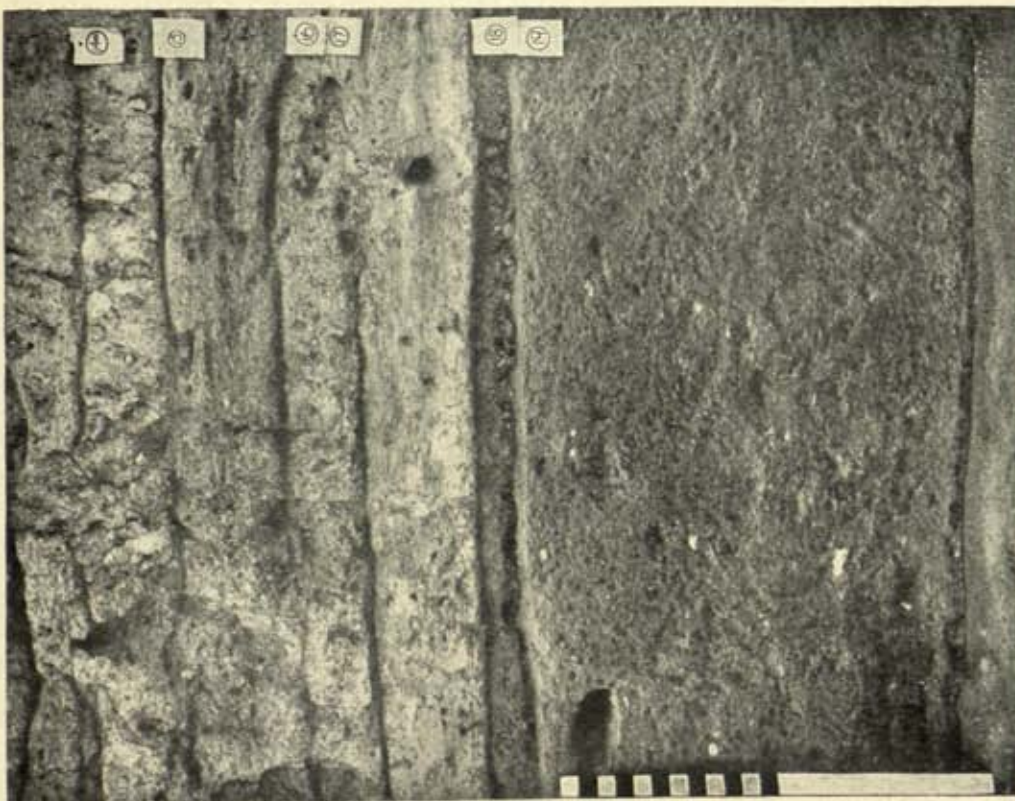
<sup>1</sup> The black-and-red effect is due to inverted firing. The upper portion of the pot is thus in contact with the reducing agents present in the combustible materials and turns black, whilst the lower portion is exposed to the air and turns red as a result of oxidization.

<sup>2</sup> Chemist's notes.

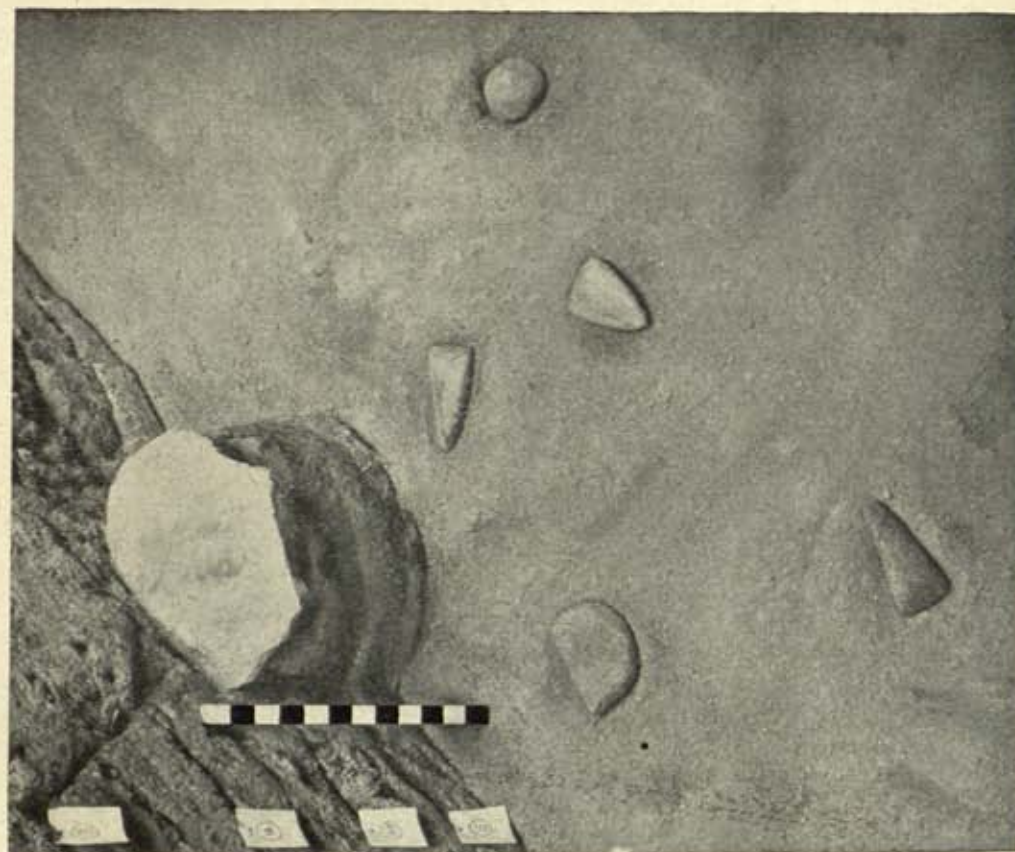
<sup>3</sup> K. de B. Codrington in *Man*, 1930, no. 139 (p. 190). For the Northern Black Polished Ware, see *Ancient India*, no. 1 (1946), p. 55.

<sup>4</sup> The Archaeological Chemist reports on the difference as follows: 'After turning on the wheel, the pots of the Northern Black Polished Ware appear to have been subjected to elaborate rubbing and burnishing, and then coated with a finely levigated, highly ferruginous clay, and again burnished to smooth the surface. The pots were then fired under reducing conditions to a temperature producing an incipient fusion of the slip. This accounts for the exceptional hardness and lustre of the pots. In the Megalithic black ware (Southern Black Polished Ware) the pots were not finished with so much care. A thin wash of ochreous clay seems to have been applied, and the pots fired in a reducing atmosphere at a lower temperature than in the case of the Northern Black Polished Ware. The slip in the latter stands out as a distinct layer, whereas in the former it is notably less distinct.'



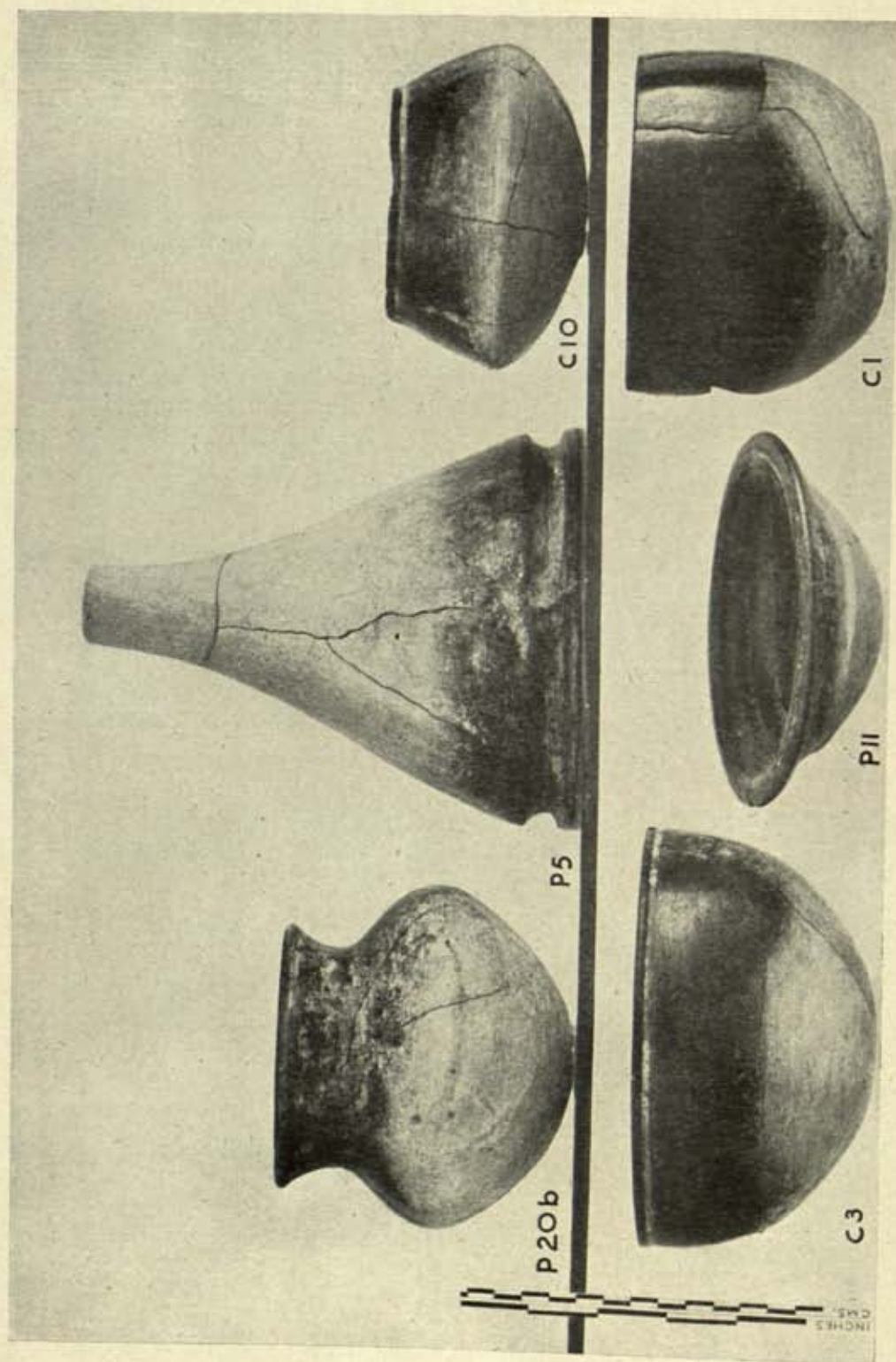


A. Section showing weathered surface (18) on layer (19) containing Brahmagiri 'Stone Axe' culture 1A



B. Brahmagiri: polished stone axes in situ in cutting Br. 21, layer 15 (see fig. 8). (Scale of inches.)





*Brahmagiri: black-and-red Megalithic pottery*



on the rim and incised herring-bone or bipinnate leaf impressions on the body. No painted pottery was found either in the cists or in the pit-circles at Brahmagiri, but a large painted jar, decorated in black on a dull red slip was included in a group of Megalith pottery deposited prior to the construction of megalithic cist VI (below, p. 221).

A number of the pots bear graffiti, all subsequent to firing (p. 244).

The following is a classification of the pottery-types from the cists.<sup>1</sup>

#### Figs. 9-12

*Type C1:* A partially straight-sided bowl of black-and-red ware with a thin sharpened rim and an almost flat base. Variant *C1a* has wider sides. Variant *C1b* is of thicker ware and has a convex profile. Variant *C1c* is thinner in section, while Variant *C1d* is a diminutive form of the principal type. This is one of the most common types from the cists. Analogies come from the Ādichanallur urn-field in the Tinnevely Dist.<sup>2</sup> and the Narsipur Sangam urn-field in Mysore.<sup>3</sup>

*Type C2:* A bowl of black-and-red ware with a thin sharpened rim like that of the previous type. It is distinguished by a prominent groove round the body and markedly convex base.

*Type C3:* A simple bowl of black-and-red ware with an externally grooved and slightly everted rim and a round base. It is weakly grooved on the outside. The example illustrated is characterized by graffiti executed after firing. Variant *C3a* is smaller than the main type. Variant *C3b* has two weak grooves on the body. Variant *C3c* is distinguished by a slightly concave base, while *C3d* has a constricted base. Variant *C3e* lacks the external groove at the rim of the main type and has a bulged body with prominent grooves.

*Type C4:* A straight-sided bowl of black-and-red ware with a slightly flared rim and a rounded base. Only one example of this type was found.

*Type C5:* A straight-sided bowl of black-and-red ware with a beaded rim and a flat base. It is characterized by two prominent grooves on the body. Variant *C5a* (distorted in baking) is more semicircular in profile. The only example is marked by graffiti executed on the exterior after firing.

*Type C6:* A bluntly carinated bowl of black-and-red ware with a sharpened rim and a slightly concave base. Variant *C6a* is externally grooved and has a rounded base. Only one example each of the type and its variant was found.

*Type C7:* A bowl of black-and-red ware with a thin sharpened rim, a slight ledge round the body and a round base. Variant *C7a* lacks the ledge of the main type but has a prominent groove. Variant *C7b*, the only example of which bears post-firing graffiti, is convex above the groove. Variant *C7c* has thinner sides and more regular profile. Variant *C7d* lacks the groove on the body. The type as a whole is fairly abundant at Brahmagiri but analogies elsewhere are hard to find.

*Type C8:* A bowl of black-and-red ware with a segmental profile, sharpened rim and grooved exterior. Variant *C8a* has multiple groovings. Variant *C8b* is slightly deeper. Analogies of this type are common in the urn-fields of the Tinnevely District.<sup>4</sup>

*Type C9:* A unique bowl of black-and-red ware with a slightly everted rim, bluntly carinated profile and rounded base. It has grooves on the body.

*Type C10:* A rare type of bowl of black-and-red ware, bluntly carinated, with low girth, weakly grooved rim and rounded base. Variant *C10a* is distinguished by multiple groovings on the body. Variant *C10b* has a thin sharpened rim and lacks the external groovings.

*Type C11:* A carinated lid of dull red ware with a slightly concave profile above and a sagger base. Variant *C11a* is smaller but has a more prominent flange. This type of lid is very common at Arikamedu<sup>5</sup> and elsewhere, and may have had a long life.

*Type C12:* A rare type of lid of dull red ware with a thin rim, central carination and sagger base. Variant *C12a* has irregular groovings on the inside. Variant *C12b* has a shorter neck.

<sup>1</sup> C is an abbreviation for 'cist', P for 'pit-circle'.

<sup>2</sup> A. Rea, *Catalogue of Prehistoric Antiquities* (Madras, 1915), pl. VI, 13 and pl. X, 3.

<sup>3</sup> A. Bruce Foote, *Prehistoric and Protohistoric Antiquities* (Madras, 1916), pl. 30, 234, 15.

<sup>4</sup> Rea, op. cit., pl. VI, 12.

<sup>5</sup> *Ancient India*, no. 2 (1946), p. 66.



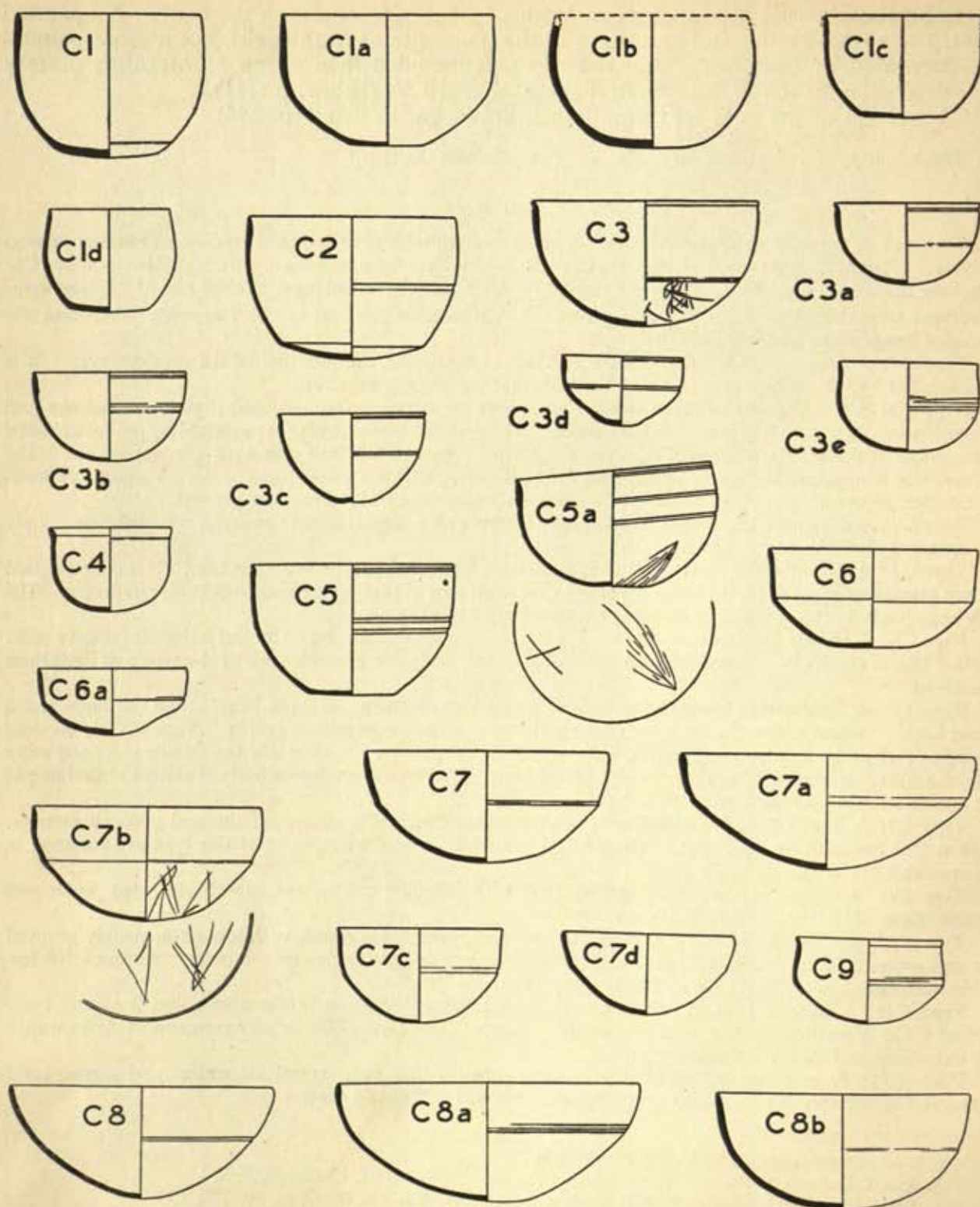


FIG. 9. Pottery from the Brahmagiri cists.  $\frac{1}{4}$



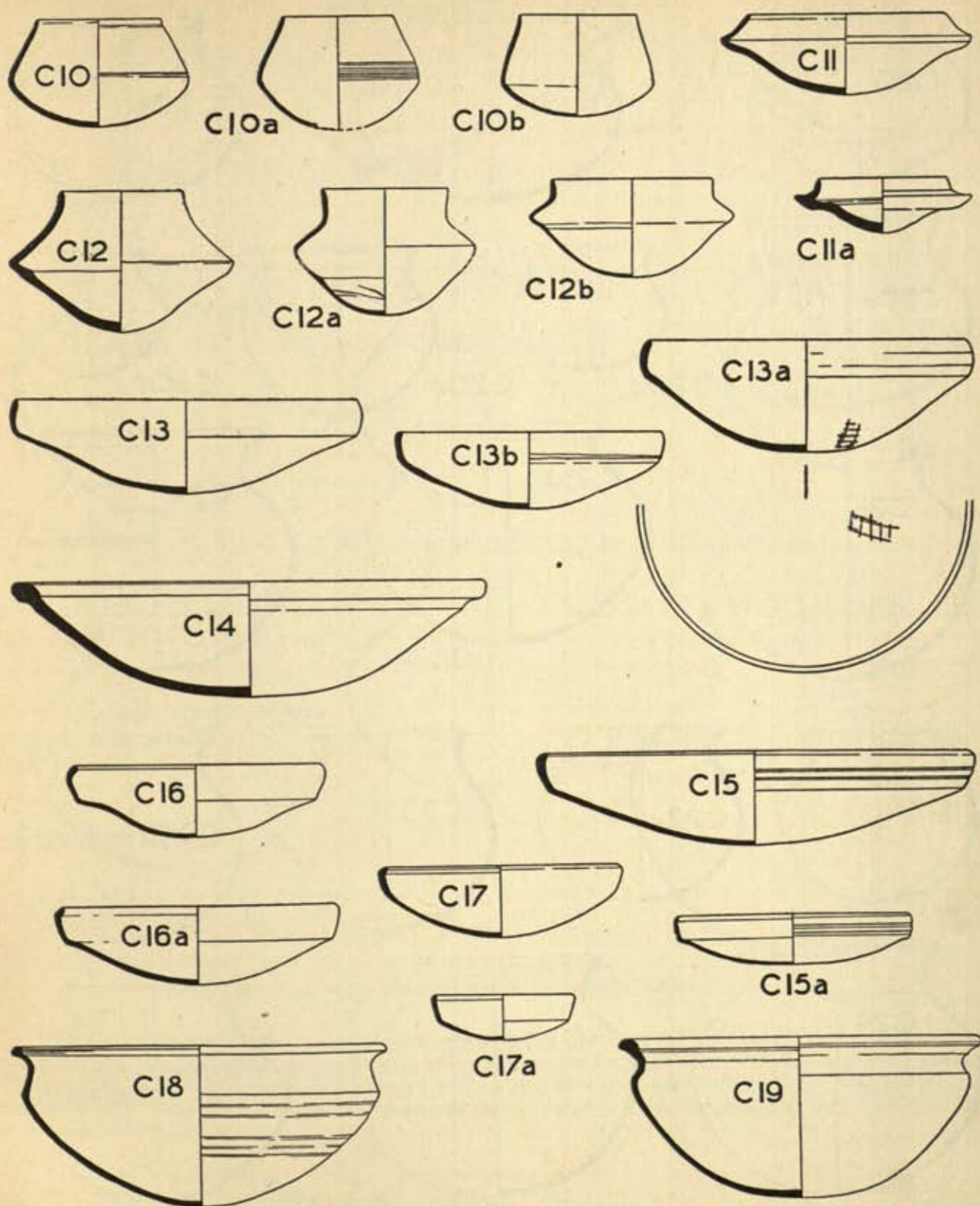


FIG. 10. Pottery from the Brahmagiri cists.  $\frac{1}{4}$



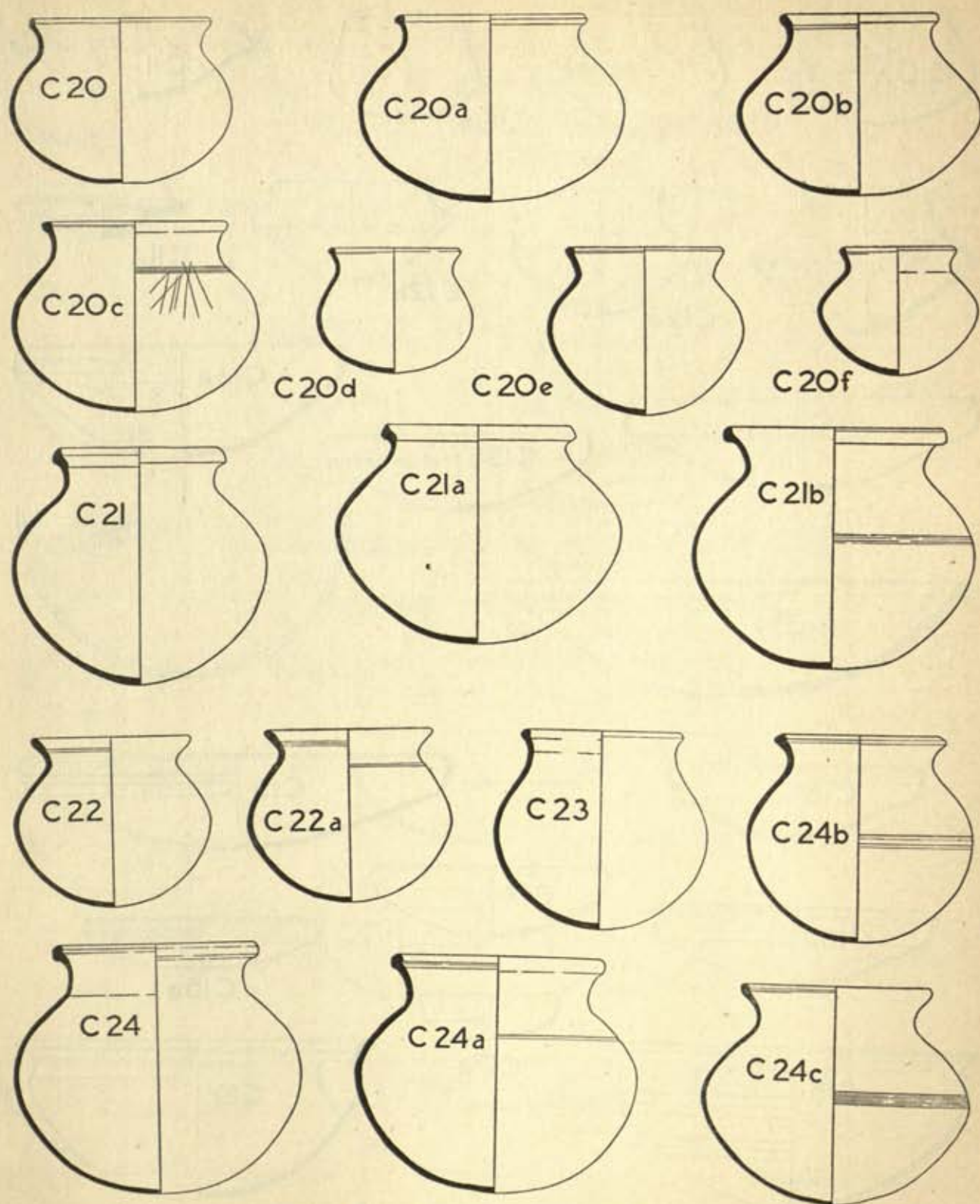


FIG. 11. Pottery from the Brahmagiri cists.  $\frac{1}{4}$



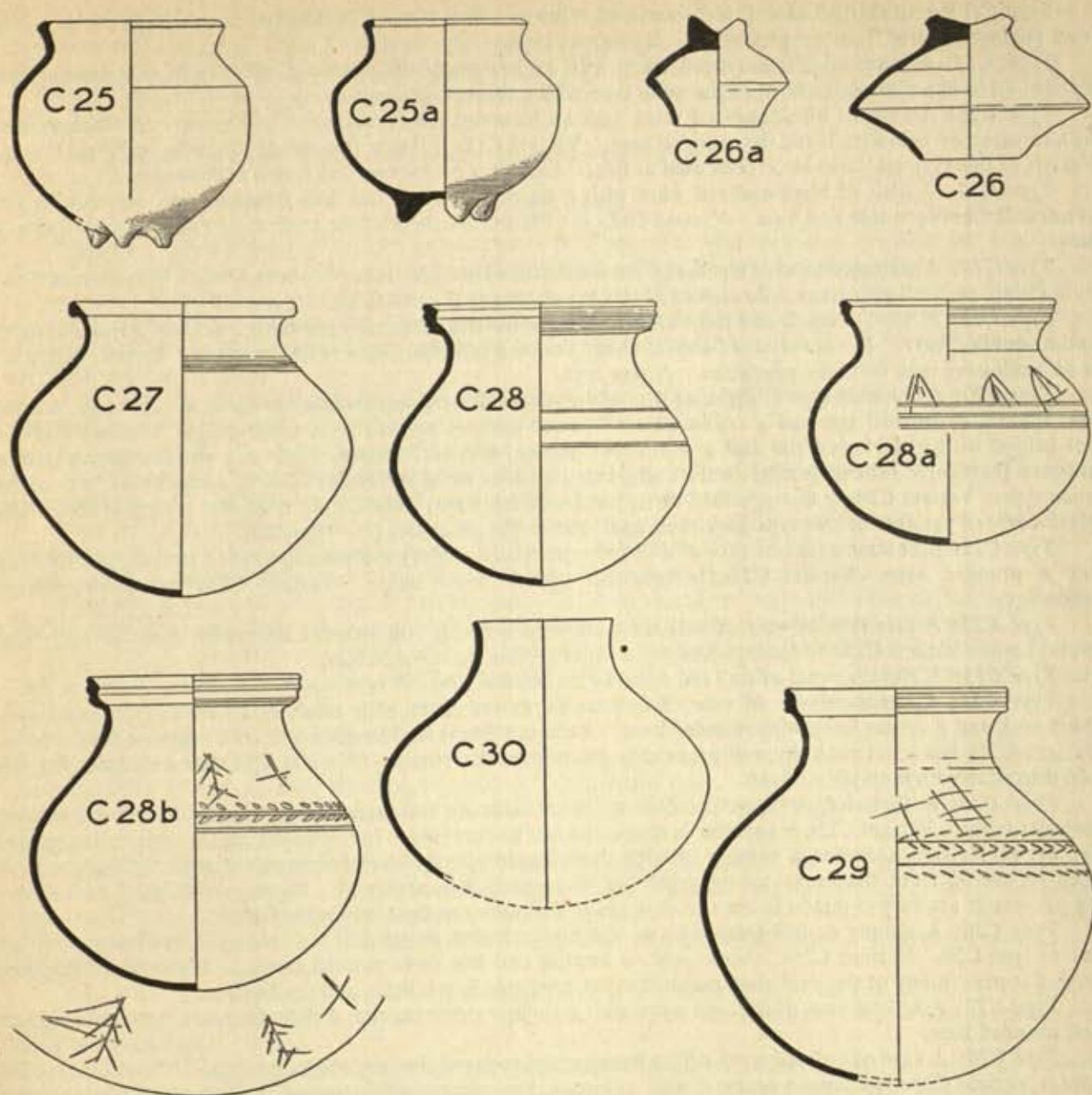


FIG. 12. Pottery from the Brahmagiri cists.  $\frac{1}{4}$

Type C13: A dish of black-and-red ware distinguished by a sharpened rim and a sagger base.<sup>1</sup> Variant C13a, which has a ladder-like graffito scratched after firing, is of deeper form. Variant C13b has a grooved exterior. Though primarily a dish, some vessels of this type may also have been used as lids. Type P13 (p. 218) is an analogous form from the pit-circles. Analogies of the type also occur in the urn-fields near Tinnevely and Perumbair.<sup>2</sup>

<sup>1</sup> Cf. *Ancient India*, no. 2 (1946), p. 56.

<sup>2</sup> Rea, op. cit., pl. VI, 1, and pl. X, 16.



*Type C14:* A thick dish of dull red ware with a heavy rolled rim and a rounded base. Type P14 (p. 216) is an analogous form from the pit-circles. A common type.

*Type C15:* A dish of black-and-red ware with an incurved rim, grooved sides and a rounded base. Variant C15a is a diminutive form of the main type with a thinner section.

*Type C16:* A dish of black-and-red ware with an incurved rim, pronouncedly concave sides demarcated by a constriction below itself and the rounded base. Variant C16a lacks the prominent concavity of the main type. Vessels of this type may also have been used as lids. Analogies of this type are found at Arikamedu.<sup>1</sup>

*Type C17:* A dish of black-and-red ware with a similar incurved rim and a round base, but lacking the constriction between side and base. Variant C17a is a diminutive form of the main type with a slightly concave base.

*Type C18:* A carinated bowl of black-and-red ware with a knobbed rim and rounded base. It is characterized by multiple external groovings. Analogies of this type occur in the urn-fields at Tinnevely.<sup>2</sup>

*Type C19:* A bowl of black-and-red ware with an everted rim, internally grooved, a slightly ledged shoulder and a rounded base. Metal vessels of similar shape are used in India today as flower vases. Type P19 (p. 216) is an analogous type from the pit-circles. A rare type.

*Type C20:* A common type of globular vase of dull terracotta-red ware with a low neck, an internally beaded and slightly out-turned rim and a round base. Variant C20a is marked by a wider bulge. Variant C20b is pot-bellied with a thickened rim and a prominent internal groove. Variant C20c is a single example with a grooved shoulder. It bears graffiti on the body, executed after firing. Variant C20d is a diminutive form of the main type. Variant C20e is distinguished by its black-and-red ware, while C20f is a smaller variety of this. The black-and-red variants of this type have their analogies in the pit-circles (cf. Type P20).

*Type C21:* A common type of vase of dull red ware with a slightly everted and beaked rim, a globular body and a rounded base. Variant C21a is squattish with a wider bulge. Variant C21b has weak external groovings.

*Type C22:* A rare type of vase of dull red ware with a flaring rim grooved internally, globular body and round base. Variant C22a is distinguished by a slight cordon on the shoulder.

*Type C23:* A globular vase of dull red ware with a beaded rim. A rare type.

*Type C24:* A common type of vase of dull terracotta-red ware with heavy and internally grooved rim, short neck and globular body with rounded base. Variant C24a is slightly squattish with a groove on the body. Variant C24b has an everted rim and prominent grooves on the outside. Variant C24c has an almost flat rim and thin sides with multiple grooves.

*Type C25:* A three-legged vessel of dull red ware with an internally beaded rim, wide shoulders and globular body. Variant C25a is squatter in shape and has thicker legs. In the earlier excavations at Brahmagiri Dr. M. H. Krishna collected a number of such three-legged pots.<sup>3</sup> Slightly bigger variants of this type have been recovered from the excavated megaliths at Hulegondi (Chandravalli). Bigger varieties of such three-legged vessels are very common in the urn-fields near Perumbair in the Chingleput District.

*Type C26:* A unique double-knobbed and sharply carinated lid of dull red ware. It was found covering pot of type C29. Variant C26a, also unique, is smaller and has more pointed knobs. Analogies of this type do not appear in any of the published megalithic pottery from South India and the Deccan.

*Type C27:* A unique vase of dull red ware with a slightly undercut rim, a globular body, grooved shoulder and rounded base.

*Type C28:* A vase of dull red ware with a heavy multi-grooved rim, a globular grooved body and a rounded base. Variant C28a is a unique example with a thinner, less emphatically grooved rim and a slight ledge round the neck. It bears three scratched markings on the body, executed after firing. Variant C28b, also unique, has incised bipinnate leaf or herring-bone impression on the body<sup>4</sup> and also bears a graffiti executed after firing. Vessels with these multi-grooved rims are rare in the megalithic sites of South India and the Deccan.<sup>5</sup>

<sup>1</sup> *Ancient India*, no. 2 (1946), p. 55, type 8.

<sup>2</sup> Rea, op. cit., pl. VI, 3.

<sup>3</sup> Presidential Address, Anthropology and Archaeology Section, Indian Science Congress, 1942.

<sup>4</sup> Bands of bipinnate leaf or herring-bone impressions are common decorations on megalithic pottery from South India and the Deccan.

<sup>5</sup> Pots with grooved rims are, however, common in the Megalithic culture levels of the town-site at Brahmagiri (see p. 236).



*Type C29:* A unique globular vessel of burnished red ware with a grooved rim and a slight groove and cordon round the neck. It is decorated with two rows of incised bipinnate leaf or herring-bone impressions and bears post-firing graffiti. It was found covered with the double-knobbed lid of type C26.

*Type C30:* A unique pear-shaped vessel of burnished red ware with a high neck, featureless rim and pronounced bulge.

The following is a classification of pottery-types from the pit-circles.

FIGS. 13-16

*Type P1:* A rare type of elongated vase of black polished ware with carinated shoulder and long tapering body. The pronounced shoulder provided a seating for lids of type P4, which in two cases were found actually in position. Variant P1a is distinguished by a cordon on the shoulder. Variant P1b also has a cordon, and its rim is more elaborately faceted. Analogies to the general type have been found in a 'barrow' at Anantpur<sup>1</sup> (now in the Madras Museum) and in a port-holed cist at Savandurg, about 22 miles W.S.W. of Bangalore (now in the Bangalore Museum).

*Type P2:* A funnel-shaped lid of black polished ware with incurved lip, multiple grooves, and solid ring-handle. Funnel-shaped lids with knobbed terminals are common in the megalithic sites of South India and the Deccan but only one other example with the ring-terminal has been noticed (below, p. 274).

*Type P3:* A rare type of funnel-shaped lid of black polished ware with a beaded rim, multiple grooves and a convex top. Variant P3a has a partially everted rim and a pointed top.

*Type P4:* A funnel-shaped lid of black polished ware with a beaded rim and a flat top. Variant P4a has an extremely thin section and graceful profile, while P4b differs from the main-type in being more conical. An analogous type comes from a port-holed cist at Chikkajala, 17 miles N.N.E. of Bangalore.<sup>2</sup>

*Type P5:* A rare type of elongated funnel-shaped lid of black-and-red ware with sides sharply incurved near the lip and a flat top. Only two such examples, one fitted within the other, were found, in Megalith IX.

*Type P6:* A squattish conical bowl or lid of black polished ware with a slightly beaded lip, a ledged shoulder, and a pointed base. Variant P6a, smaller than the main type, has a more pronouncedly beaded rim and a sharply pointed base. Analogous types in black-and-red ware come from the Adichanallur urn-field, Tinnevely.<sup>3</sup> Type P7 is a variant of a similar type in red ware.

*Type P7:* A rare type of vessel of dull red ware, found in use as a lid, with a flat rim, an oval mouth, and a sharply carinated and grooved waist tapering down to a pointed base. Variant P7a is squat in shape and has a flanged rim. Type P6 is similar but is of black ware. Analogous types in black-and-red ware come from the Adichanallur urn-field.<sup>4</sup>

*Type P8:* A small carinated bowl of black polished ware with an everted and sharpened rim and a rounded base. It is distinguished by a groove round the neck and a flattened band round the body. An analogous type comes from the urn-field near Perumbair, Chingleput Dist.<sup>5</sup>

*Type P9:* A unique bowl of black polished ware with straight sides above a central carination, a thin sharpened rim, and round base.

*Type P10:* A rare type of bowl of black polished ware with a slightly undercut rim, carinated shoulder and sides tapering to a blunt base. Variant P10a has a thick everted rim and has a less pronounced carination than the main type.

*Type P11:* A shallow tulip-shaped vase with a flared and everted rim, a ledge round the body and a rounded base. It is invariably grooved on the inside. This type is found in both black and black-and-red wares. Variant P11a, of black ware, agrees generally with the principal type but has a slightly flattened base. Variant P11b is wider and has a more flaring and thickened rim, while variant P11c has an externally beaked rim and a pronounced internal depression corresponding to the external ledge. Variant P11d has an externally grooved rim. The occurrence of this general type in definite stratified levels of the habitation areas at Brahmagiri provides an important link between them and the megaliths. The type is fairly common at Brahmagiri but analogies elsewhere have not been noticed.

<sup>1</sup> Bruce Foote, *Catalogue of Prehistoric Antiquities*, pl. XXXIII, 1231.

<sup>2</sup> *Ibid.*, pl. XXVI, 1286.

<sup>3</sup> A. Rea, *Catalogue of Prehistoric Antiquities*, pl. VI, 28.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*, pl. X, fig. 15.



*Type P12:* A rare type of short, wide-mouthed pedestalled vessel of black polished ware, characterized by a globular cup with an externally grooved rim and a hollow stem. Analogies to this type come from the Adichanallur (Tinnevely) urn-field,<sup>1</sup> and from Vellalur in the Coimbatore Dist.<sup>2</sup> The use of these vessels is not known; they may have been cups or incense-burners, or even a ring-stand to hold round-bottomed vessels.<sup>3</sup>

*Type P13:* A shallow dish of black-and-red ware distinguished by a sharpened vertical rim, bluntly carinated sides and a rounded base. Variant P13a replaces the carination with a groove. Though primarily used as dishes, vessels of this shape may also have been used as lids. The type is a common one and is analogous to Type C13 from the cists.

*Type P14:* A shallow dish of red ware with a thick gritty core, clubbed rim, and rounded base. It has a slightly corrugated interior. Variants P14a and b are shallower, differ slightly in the shape of the rims, and lack the inner corrugations. Type C14 is an analogous type from the cists. A common type.

*Type P15:* A vase of red ware with a heavy, internally grooved rim and a globular body. Variant P15a (one example) is similar in essential features except for the rim which is everted and wedge-shaped. It bears a graffito, executed after firing.

*Type P16:* A rare type of bowl of black polished ware with a horizontal rim, a broad spout, and a rounded profile. Possibly a milk-bowl. A similar vessel in the Madras Museum was found at Patpad, Banganapalle State, south of Kurnool.<sup>4</sup>

*Type P17:* A unique pot-bellied vase with a thin haematite slip on the exterior. It has an everted rim, internally beaked, and a pointed base. As, with the possible exception of P12, no ring-stands were found in the Brahmagiri megaliths, it is presumed that such pointed vessels were fixed to the ground.<sup>5</sup>

*Type P18:* A globular jar of dull red ware with a flanged and grooved rim and a round base. The shoulder is grooved. Variant P18a has a flatter rim with internal beak and external groove. The only example of this variant has a post-firing graffito on the body. Variant P18b has an externally beaded and internally beaked rim. The only example has three oblique lines on the outside, incised after firing. The general type, supported on ring-stands, is represented in the Adichanallur urn-field.<sup>6</sup>

*Type P19:* A rare type of carinated bowl of black-and-red ware with a heavy everted rim and a rounded base. Variant P19a has a more sharpened rim and profile. Type C19 is an analogous type from the cists.

*Type P20:* A vase of black-and-red ware with a flaring rim, a globular body, and a rounded base. There are a slight ledge at the shoulder and a girth-groove. P20a and b are unique variants and bear post-firing graffiti; P20a has a slightly flattened base, and P20b has a more emphatic rim. Variant P20c is a coarser example with thicker walls. Variant P20d has a beaded rim and multiple grooves on the body. Type C20 is an analogous type from the cists. A common type.

*Type P21:* A large round-bottomed jar with a flanged rim bearing multiple grooves with incised herring-bone pattern. On the body are two bands of incised zigzag pattern between grooves. Variant P21a is a unique example with cord impressions on the rim, concentric grooves and slashes on the shoulder and bipinnate leaf incisions between grooves on the body. The type is common at Brahmagiri, but analogies elsewhere have not been noticed.

#### *The grouping of the pottery-types in the Brahmagiri cists and pit-circles*

The types described above were grouped as follows in the cists and pit-circles excavated in 1947. The figure in brackets after each type-symbol indicates the number of examples in the group.

MEGALITH I (cist)	.. C1a(1), C1d(2), C3(2), C3e(5), C4(1), C5(1), C6(1), C7c(1), C10a(2), C10b(1), C20c(1), C24(1), C25a(1).
MEGALITH II (pit)	.. P1(1), P1a(1), P2(1), P3(1), P3a(1), P4(2), P4a(1), P6(1), P14(2), P14a(1), P15(2), P18(2), P20d(1).

<sup>1</sup> Rea, op. cit., pl. VIII, nos. 3 and 22.

<sup>2</sup> Bruce Foote, op. cit., pl. XXIV, no. 1093.

<sup>3</sup> Rea, op. cit., pl. VI, 15.

<sup>4</sup> Bruce Foote, *Indian Prehistoric and Protohistoric Antiquities*, pl. 26.

<sup>5</sup> Vessels with pointed bases are common in the urn-fields of Tinnevely District, where they were supported by ring-stands.

<sup>6</sup> Rea, op. cit., pl. VIII, 7.



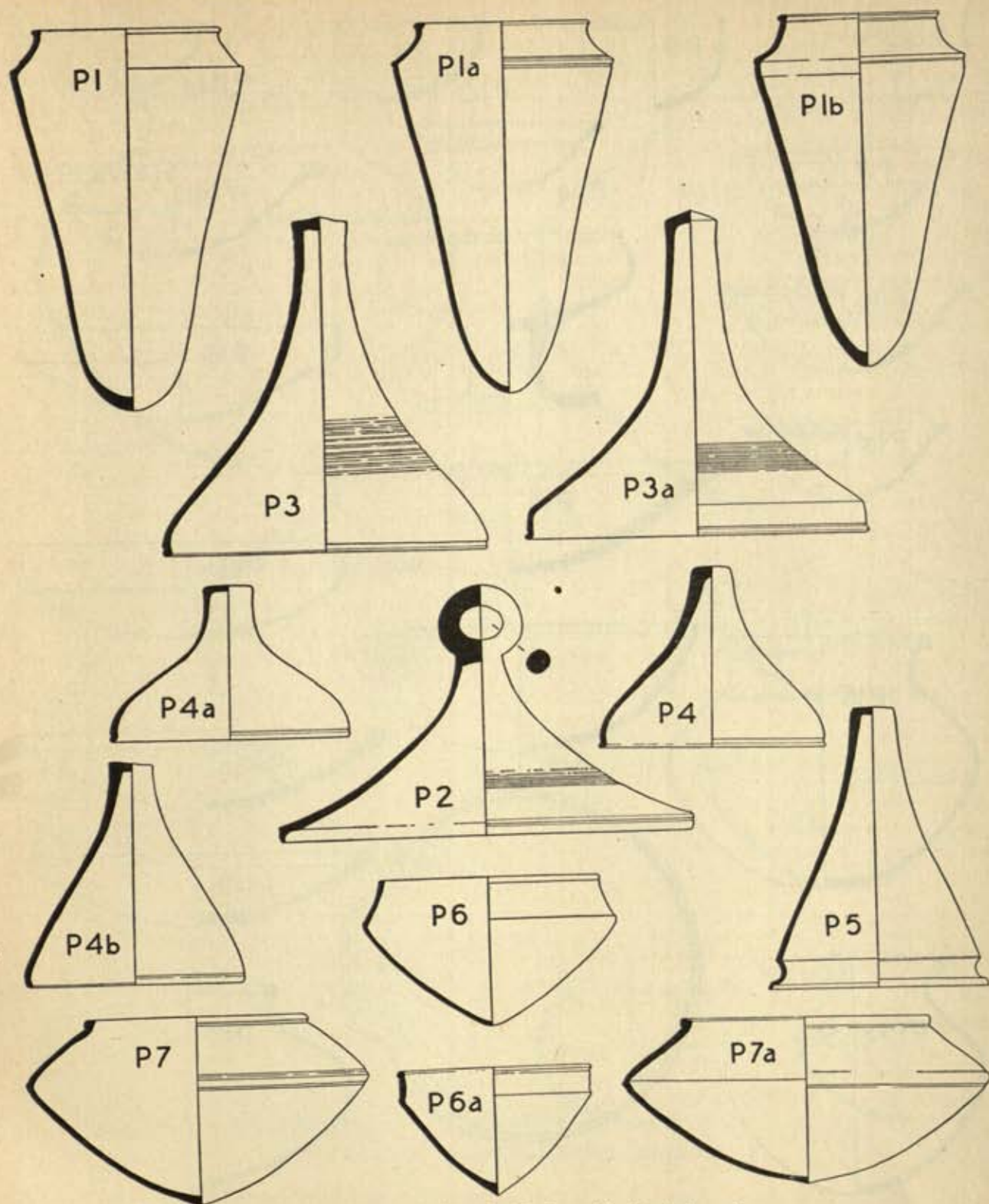


FIG. 13. Pottery from the Brahmagiri pit-circles.  $\frac{1}{4}$



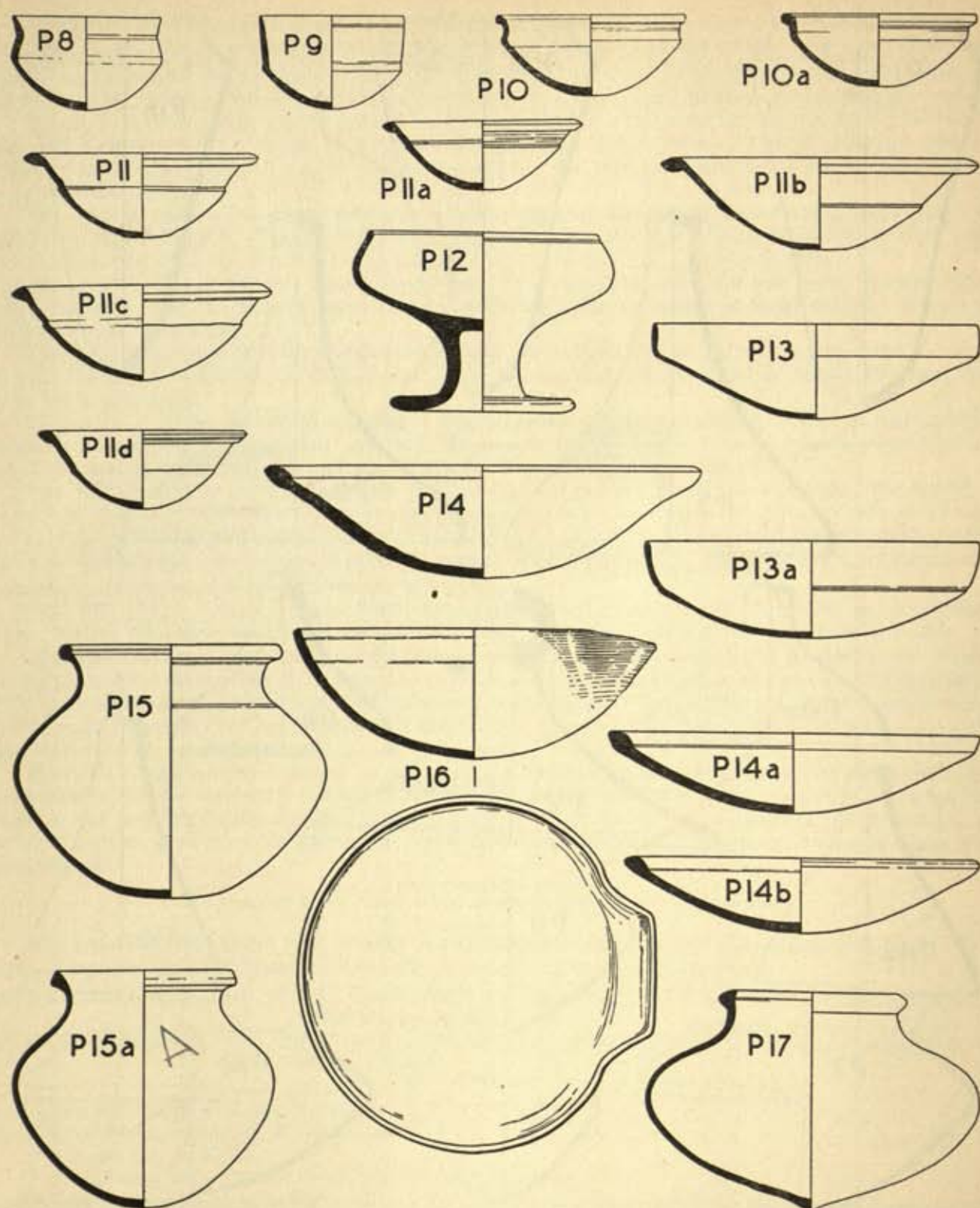


FIG. 14. Pottery from the Brahmagiri pit-circles.  $\frac{1}{4}$



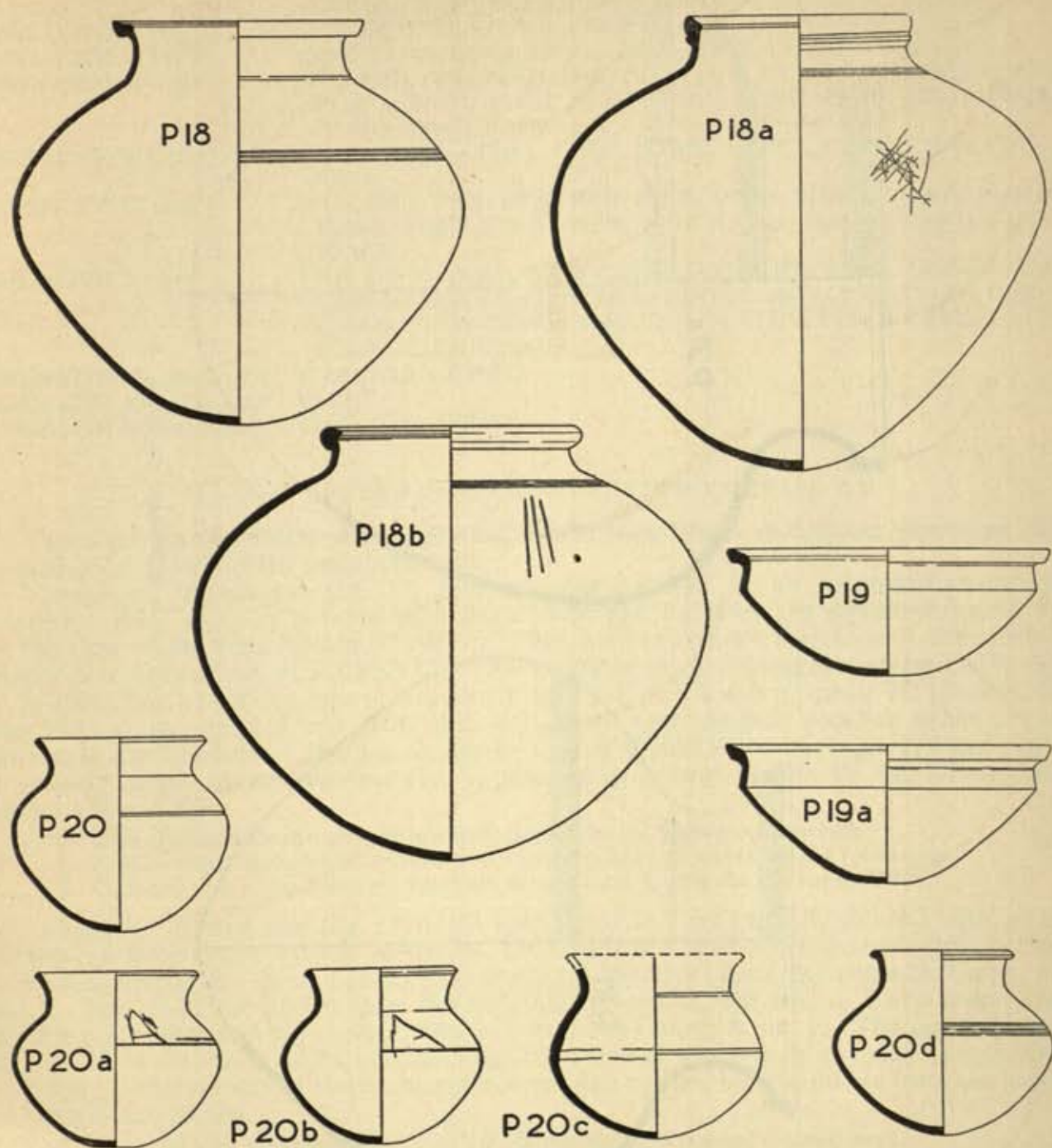


FIG. 15. Pottery from the Brahmagiri pit-circles.  $\frac{1}{4}$



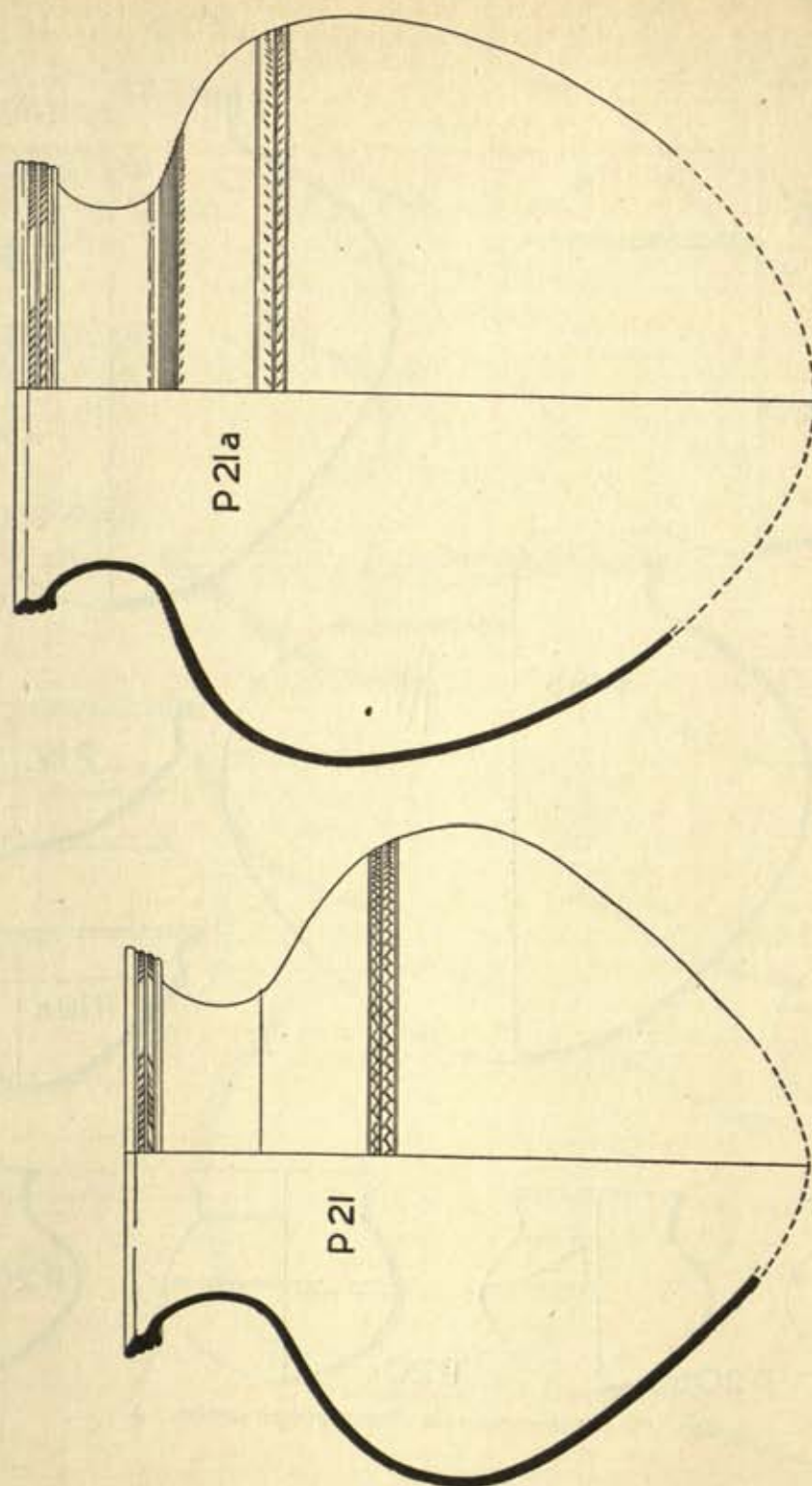


FIG. 16. Pottery from the Brahmagiri pit-circles.  $\frac{1}{4}$



MEGALITH IV (cist)	.. C3(5), C3a(2), C3c(1), C5(2), C7(2), C7d(1), C8(2), C8b(1), C9(1), C10(2), C12(3), C12a(2), C14(1), C18(3), C19(1), C20(1), C22(1), C24(8), C24a(2), C24b(2), C26a(1), C28(4), C28b(1), C30(1).
MEGALITH V (cist)	.. C1(1), C2(1), C3(1), C16(1), C19(1), C24b(1).
MEGALITH VI (cist)	.. C8a(1), C11(1), C14(2), C19(1), C20a(1), C21(2), C21a(1), C24(2).
MEGALITH VII (pit)	.. P1(1), P3(2), P4(3), P4b(1), P6(3), P6a(1), P8(2), P9(1), P10(3), P10a(1), P11a(2), P11c(1), P12(2), P13(2), P13a(1), P14(1), P16(1), P17(1), P18(1), P19(3), P20c(1), P20e(1), P21(1).
MEGALITH VIII (cist)	.. C7a(1), C13(2), C13a(1), C14(1), C20b(1), C21b(1), C24(3), C26(1), C27(1), C29(1).
MEGALITH IX (pit)	.. P1(1), P4(1), P5(2), P6(2), P7(1), P7a(1), P11(6), P11b(1), P11d(1), P14b(1), P15a(1), P16(1), P18a(1), P18b(1), P19(1), P20(2), P20a(1), P20b(1), P21(3), P21a(1).
MEGALITH X (cist)	.. C1(4), C1a(1), C1d(1), C3(3), C3a(1), C3b(1), C5(3), C5a(2), C7b(1), C10(1), C10b(1), C11(1), C11a(1), C12a(1), C12b(1), C13b(1), C15(2), C15a(1), C16(2), C16a(1), C17(2), C20(4), C20d(1), C20e(1), C22(1), C22a(1), C23(2), C24(3), C24c(1), C25(3), C28a(1).
MEGALITH XA (small cist)	C1b(1), C1c(1), C20f(1).
MEGALITH XB (small cist)	C6a(1).
MEGALITH XC (small cist)	C1c(1), C2(1), C17a(1).

(f) *Other Megalith pottery from the cemetery area (fig. 17)*

Two groups of pottery of 'megalithic' fabric were found in deposits preceding the construction of two of the megalithic cists.

*Group A.* Three pots (fig. 17, 1-3) occurred together in an accumulation which overlay a floor partially covered with stone slabs and underlay the surface-soil existing at the time of the construction of cist V. They are presumably therefore of appreciably earlier date (see section, pl. LXXXVIII). Nevertheless, no. 1, though not represented in cist V, is a familiar megalithic type and occurs in cists VIII and X and pit-circle VII (Types C13 and P13; above, pp. 213 and 216). No. 2 is a new type, without parallels either in the cists or in the pit-circles. No. 3 is similar to Types C19 and P19 (above, pp. 214 and 216); it actually occurs in the overlying cist V, and is also present in cists IV and VI and pit-circles VII and IX.

1. Dish of black-and-red ware with internally beaded rim and slightly concave base.
2. Globular bowl of black-and-red ware with thin sharpened rim, short neck and round base.
3. Carinated vase of black-and-red ware with flared mouth, beaded rim and rounded base.

*Group B.* Eleven pots (fig. 17, 4-13) were found in a pit partially floored with slabs beside and prior to cist VI (see section, pl. LXXXIX) in a layer precisely equivalent to that containing Group A. Nos. 4 and 5 have analogies in cist VI itself and resemble Group A, no. 3. Nos. 6-13 are absent from the cists and pit-circles, but nos. 6, 7 and 8 and one broken pot of the same type (not illustrated) resemble Group A, no. 2. The large painted jar, no. 12, is the only vessel from the Megalithic culture which is in any way comparable with the painted pottery of the Brahmagiri Stone Axe culture IA, but differs from the latter in being wheel-turned.

4. Carinated vase of black-and-red ware with slightly undercut rim and rounded base.
5. Bluntly carinated vase of black-and-red ware with beaded rim and rounded base.
6. Globular bowl of black-and-red ware with thin sharpened rim, grooved neck and rounded base.
7. Bluntly carinated globular bowl of black-and-red ware with thin sharpened rim and rounded base.
8. Bluntly carinated globular bowl of black-and-red ware with thin sharpened rim, weakly grooved neck, and rounded base.



9. Deep bluntly carinated bowl of black-and-red ware with beaded rim and rounded base.
10. Bottle-necked vessel of dull red ware with beaded rim, globular body and thick round base.
11. Conical bowl of black-and-red ware with externally grooved rim and rounded base. Analogies occur in the urn-fields near Tinnevely.<sup>1</sup>
12. Large painted jar with externally beaked rim, short neck, globular body and rounded base. The painted decoration in dark ochre, applied after firing on a dull red slip, consists of horizontal bands and multiple horizontal crescents.
13. Neck-fragment of a large jar of dull red ware with flaring rim and globular body.

(g) *Pottery from the town-site*

As indicated above (p. 199), the occupation of the town-site falls into three main phases, with a subdivision of the earliest.

- |                |                               |
|----------------|-------------------------------|
| IA. }<br>IB. } | Brahmagiri Stone Axe culture. |
| II.            | Megalithic culture.           |
| III.           | Āndhra culture.               |

The pottery illustrated from the town-site is prefixed with the index-letter T.

*Pottery of the Brahmagiri Stone Axe culture*

In contradistinction to the wheel-made pottery of the later cultures, all the pottery of the Brahmagiri Stone Axe culture is hand-made. Throughout both subdivisions of this culture, the predominant ware is of a coarse grey fabric, sometimes with a thin slip of the same clay. Most of it is crudely made, but a proportion of the sherds shows polish, particularly in the higher levels. A dominant type throughout is that of a round-bottomed vessel with plain, slightly everted rim. It is evident that the subdivisions are variations of an essentially integral culture, of which the earlier phase is somewhat more elaborate than the later.

*Sub-phase IA.* Evidence of this subdivision occurred at the base of the cuttings Br. 17, 21, 22 and 23, and, as noted above, there was stratigraphical evidence of an interruption in the occupation of Br. 21 at the end of the sub-phase. Alongside sherds of coarse grey pots similar to those characteristic of sub-phase IB, were two classes of pottery which are absent from the latter: namely, painted pottery and incised pottery. The sherds found in the limited area exposed were too fragmentary to indicate the shapes employed in these two classes.

The painted sherds have alternatively a red or a buff slip. Those with a red slip are burnished and, according to the Archaeological Chemist, seem to have been salt-glazed. Those with a buff slip are neither burnished nor glazed. The two categories occur together. The painted decoration is applied after firing; the pigment is ochre<sup>2</sup> with a predominantly brownish purple colour. The sherds are too small to indicate the range of pattern, but this appears to have been of a simple character, including curved lines possibly representing in some cases a summary and highly conventionalized plant-pattern (see pl. CVII and fig. 18).<sup>3</sup>

The incised sherds represent elementary herring-bone or criss-cross patterns.

<sup>1</sup> Rea, op. cit., pl. VI, 27, and pl. VIII, 5.

<sup>2</sup> Chemist's notes.

<sup>3</sup> The published assertion that this painted pottery is 'remarkably similar to some Indus Valley pottery' is without any sort of foundation. There is no resemblance whatsoever, technically or artistically, between the Brahmagiri and the Indus Valley ceramics.



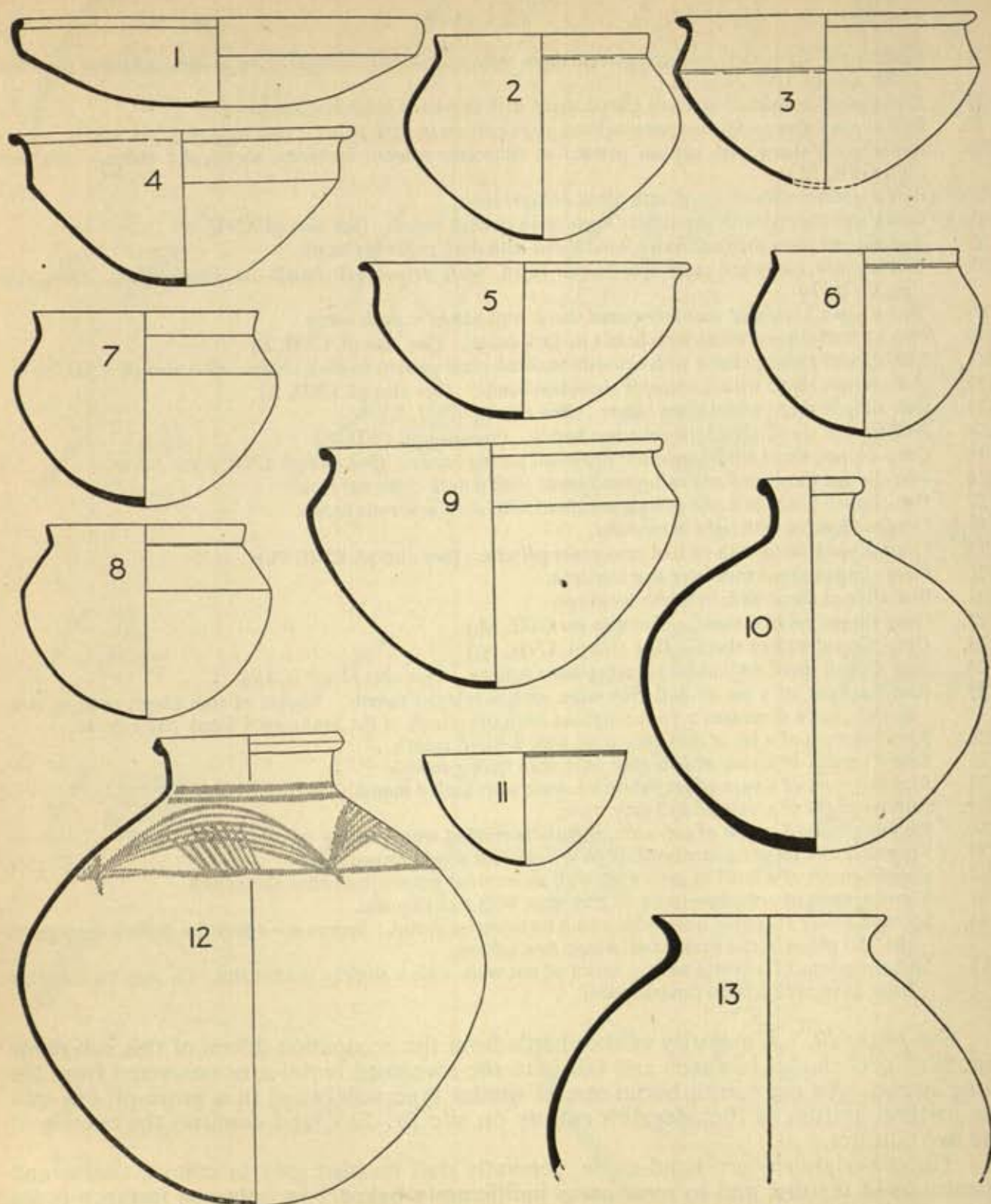


FIG. 17. Other Megalith pottery from the cemetery area.  $\frac{1}{4}$



Figs. 18-19

- T1. Red-slipped burnished and salt-glazed sherd with curvilinear decoration in a dark ochreous pigment. (See also pl. CVII, 5.)
- T2. Red-slipped burnished and salt glazed sherd with two dark ochreous bands.
- T3. Buff-slipped sherd with conventionalized plant-pattern in dark ochre. (See also pl. CVII, 6.)
- T4. Buff-slipped sherd with cordon painted in chocolate colour; incisions, above and below. (See also pl. CVII, 12.)
- T5. Buff-slipped cordoned sherd with black oblique lines.
- T6. Buff-slipped sherd with curvilinear decoration in dark ochre. (See also pl. CVII, 9.)
- T7. Red-slipped burnished and salt-glazed sherd with dark ochreous bands.
- T8. Red-slipped burnished and salt-glazed sherd with criss-cross bands in dark ochre. (See also pl. CVII, 7.)
- T9. Red-slipped burnished and salt-glazed sherd with bands in dark ochre.
- T10. Pinkish buff-slipped sherd with bands in dark ochre. (See also pl. CVII, 2.)
- T11. Buff-slipped sherd painted with conventionalized plant-pattern in dark ochre. (See also pl. CVII, 10.)
- T12. Buff-slipped sherd with horizontal chocolate bands. (See also pl. CVII, 3.)
- T13. Buff-slipped sherd with brown bands. (See also pl. CVII, 8.)
- T14. Buff-slipped sherd with dark ochreous bands. (See also pl. CVII, 1.)
- T15. Grey-slipped sherd with horizontal brownish purple bands. (See also pl. CVII, 4.)
- T16. Red-slipped burnished and salt-glazed sherd with a dark ochreous band.
- T17. Red-slipped burnished and salt-glazed sherd with dark ochreous bands.
- T18. Cordoned sherd with light brown slip.
- T19. Grey-slipped sherd with incised criss-cross pattern. (See also pl. CVII, 11.)
- T20. Grey-slipped sherd with irregular incisions.
- T21. Buff-slipped sherd with irregular incisions.
- T22. Grey-slipped incised sherd. (See also pl. CVII, 13.)
- T23. Grey-slipped incised sherd. (See also pl. CVII, 14.)
- T24. Buff-slipped sherd with incised herring-bone pattern. (See also pl. CVII, 15.)
- T25. Rim-fragment of a jar of dull grey ware with a splayed mouth. Vessels of this shape, used as urn-burials, are a dominant type throughout both the phases of the Brahmagiri Stone Axe culture.
- T26. Rim-fragment of a jar of dull grey ware with a flared mouth.
- T27. Rim-fragment of a vase of dull grey ware with flaring mouth.
- T28. Rim-fragment of a vase of greyish-black ware with flaring mouth.
- T29. Rim-fragment of a vase of dull grey ware.
- T30. Rim-fragment of a vase of red ware, slightly burnished with a flaring mouth.
- T31. Fragment of a large rimless bowl of grey ware with a light brown slip.
- T32. Rim-fragment of a bowl of grey ware with an external groove just below the mouth.
- T33. Rim-fragment of a shallow basin of grey ware with a chalky slip.
- T34. Spouted vessel of coarse ware with a thin terracotta-red slip. Spouts are a familiar feature throughout the 'IB' phase of the Brahmagiri Stone Axe culture.
- T35. Neck-fragment of a bottle-necked vessel of red ware with a slightly beaded rim. (It may on the other hand have been a large funnel-spout).

*Sub-phase IB.* A majority of the sherds from the occupation-débris of this sub-phase represent pots similar in shape and fabric to the seventeen burial-urns recovered from the same strata. An eighteenth burial-urn of similar type was found in a grave-pit cut into the earliest stratum of the Megalith culture on site Br. 22A, and confirms the overlap of the two cultures.

These burial-urns are hand-made, generally dull mottled grey in colour, coarse and micaceous in texture, and in most cases indifferently baked. In only one instance is the surface polished. They have a globular body with a wide mouth, flared rim and rounded base, and on an average measure 13 inches in height and 12 inches in diameter at the mouth.



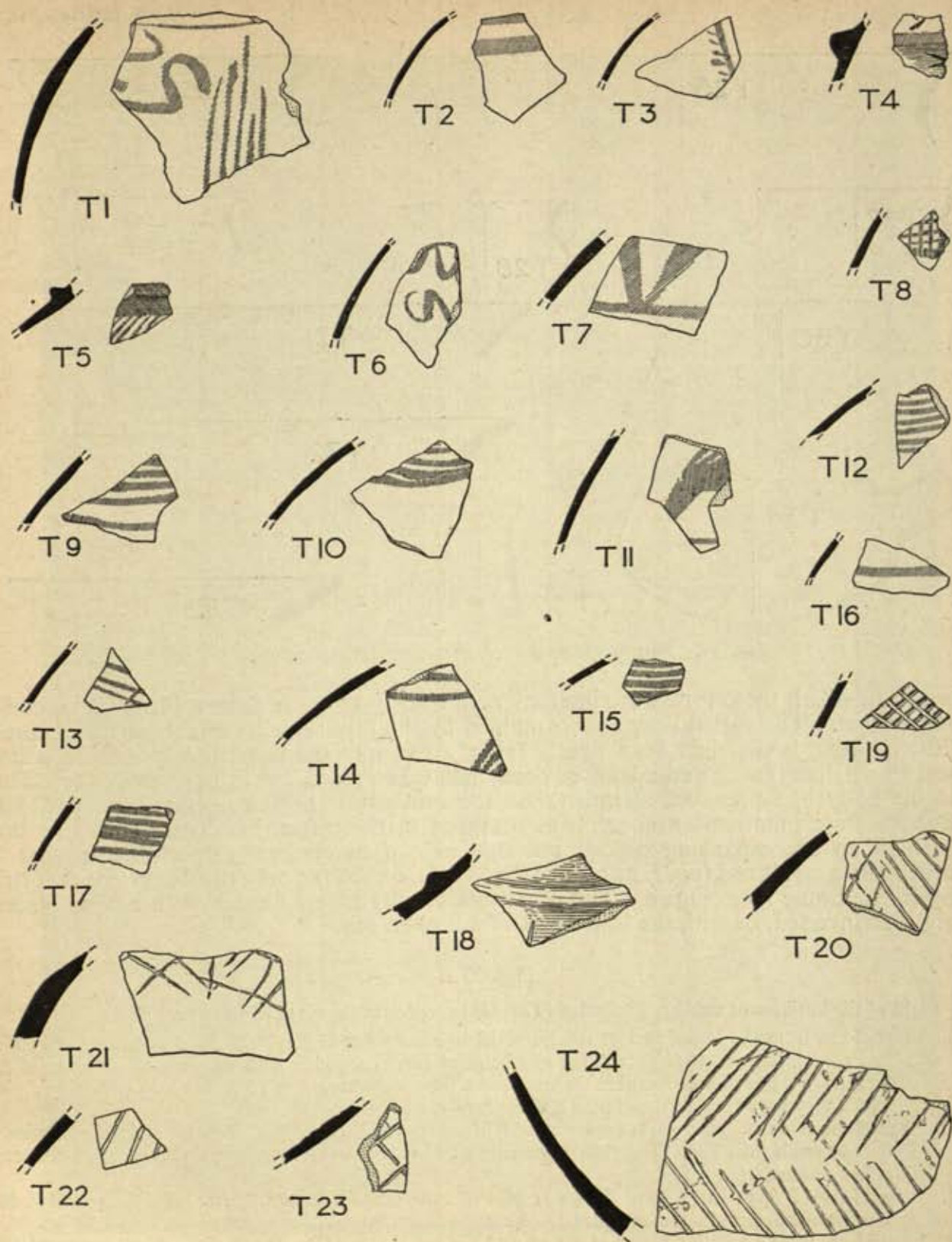
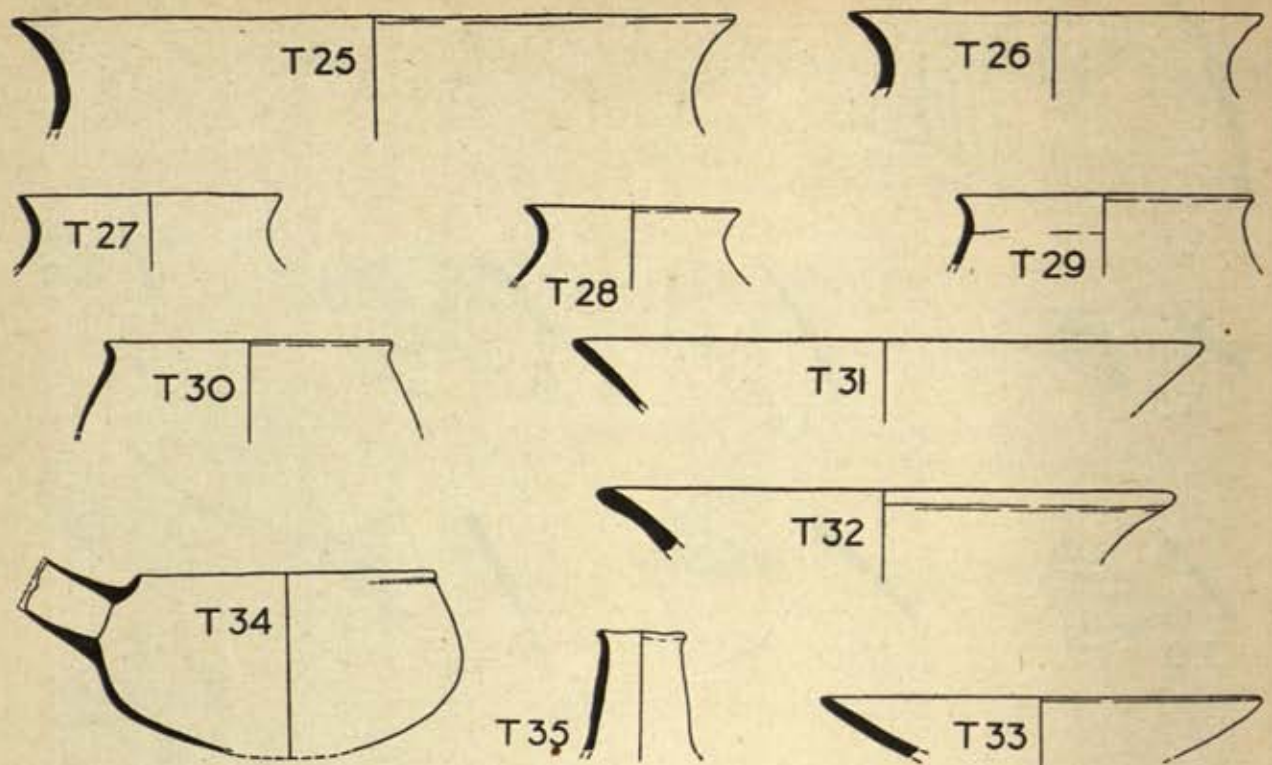


FIG. 18. Pottery of the Brahmagiri Stone Axe culture IA.  $\frac{1}{2}$



FIG. 19. Pottery of the Brahmagiri Stone Axe culture IA.  $\frac{1}{4}$ 

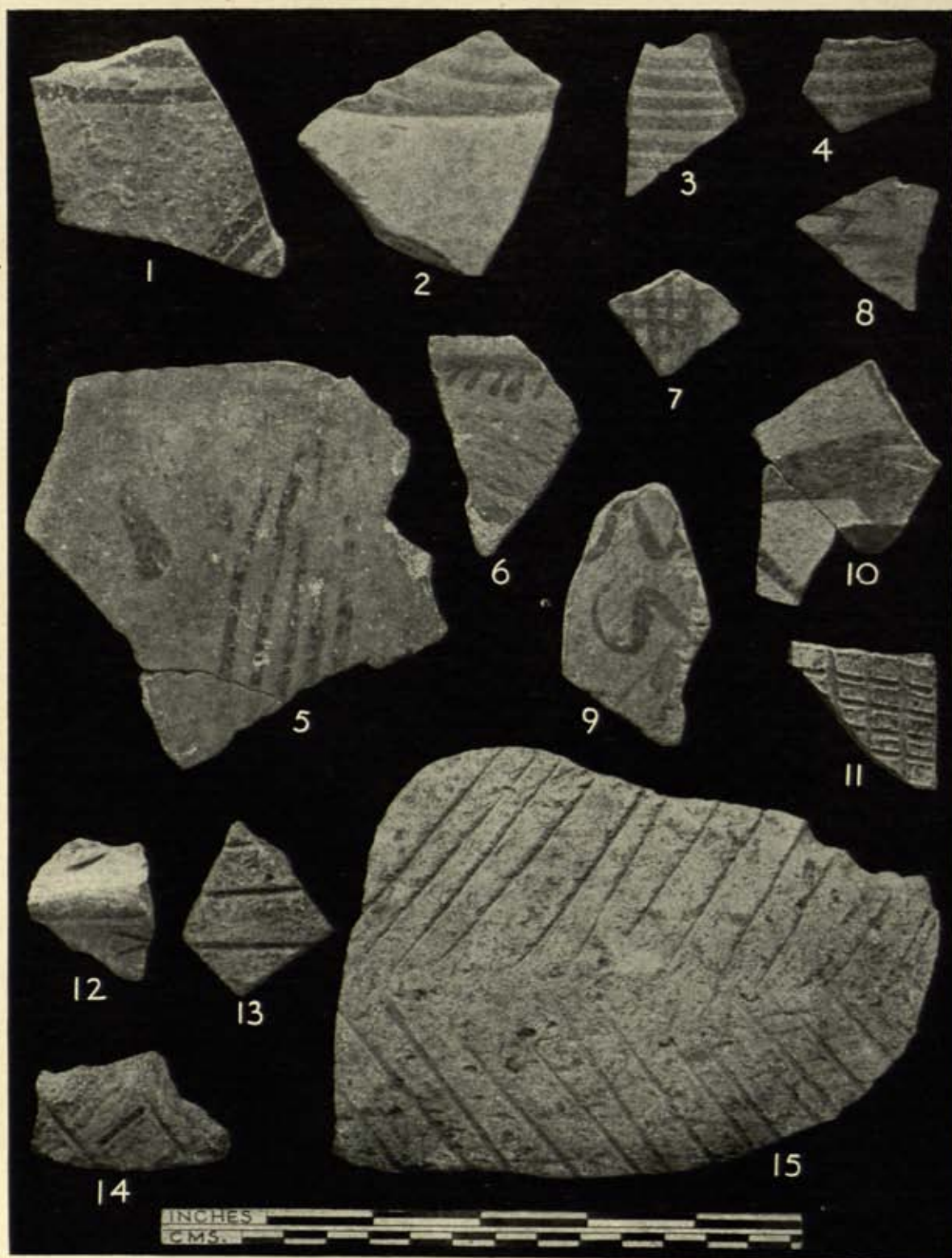
The pits in which these urns were inserted were usually no more than sufficient to accommodate them. The skeletal remains contained by the urns were invariably those of small children, whose bodies had been tightly folded to fit into the restricted space. In a few cases, where disturbance and advanced decay had taken place, it was not possible to affirm that the body had been buried intact, but the evidence is not clear enough to establish deliberate fragmentation-burial, such as occurred in the megalithic cists. Only one urn contained an accompanying object, but this was of exceptional importance in that it consisted of a small rod (pin?) of bronze (fig. 41, 1), one of the only two occurrences of this alloy in the Stone Axe culture. The urns were usually covered either with a bowl placed upright or inverted, or with the lower half of a broken urn.

## Figs. 20-21

Eight of the burial-urns are here illustrated (T36-43) to represent the range of the type.

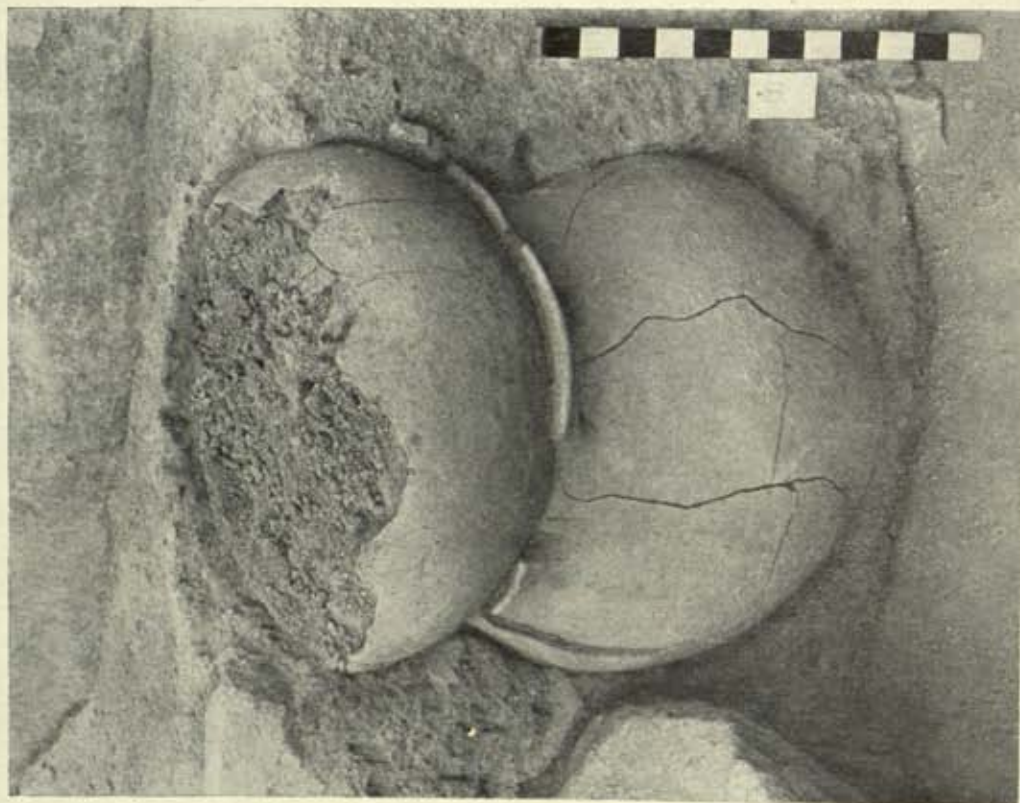
- T36. Burial-urn from the lower part of sub-phase IB in cutting Br. 21 (layer 15 in section, fig. 8). The urn contained two small pots (T36a-b) of similar fabric, together with the decayed skeleton of an infant. Under the bones, within the urn, was a featureless bronze rod 3 inches long (probably a pin, which may have been used to fasten a wrapping—see p. 267).
- T37. Burial-urn from the lower part of sub-phase IB in cutting Br. 21 (layer 15). It has a slightly more widely flared mouth than T36. The skeletal remains consisted of the broken skull, some ribs and a few long bones of an infant.
- T38. Burial-urn of squat shape from the lower part of sub-phase IB in cutting Br. 16B. It contained the complete skeleton of an infant (pl. CIX A).
- T39. Burial-urn from a middle stratum of sub-phase IB in cutting Br. 16B. It contained the decayed skeleton of an infant.



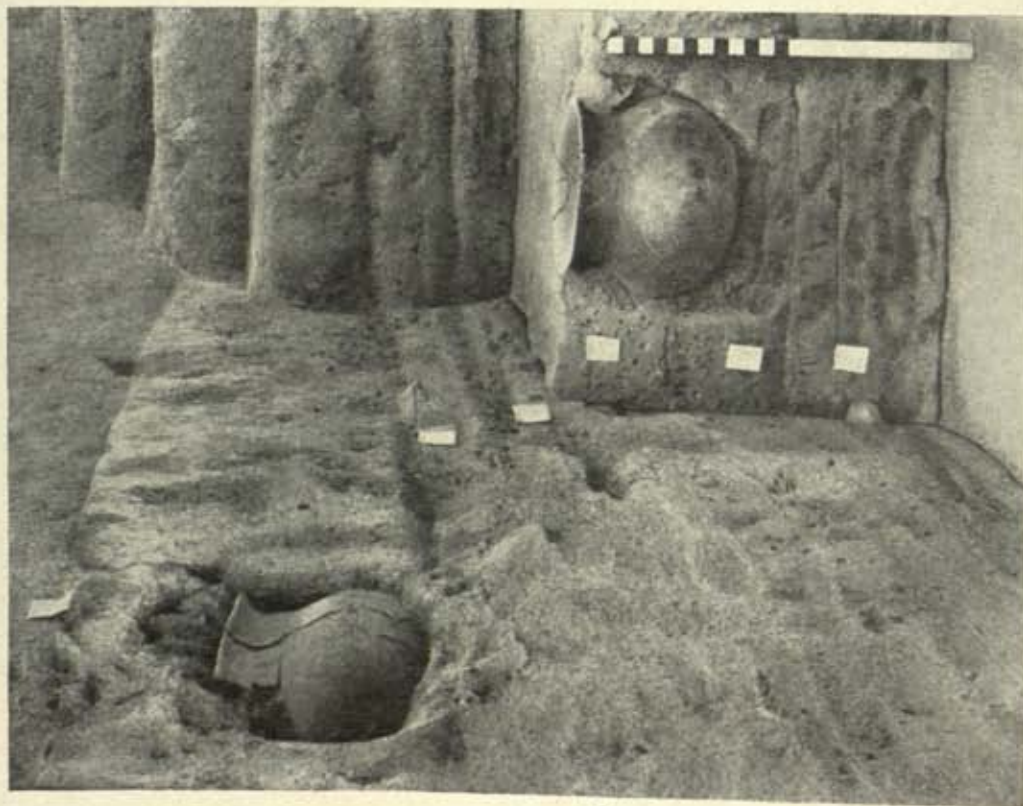


*Brahmagiri: painted and incised pottery of the 'Stone Axe' culture IA*



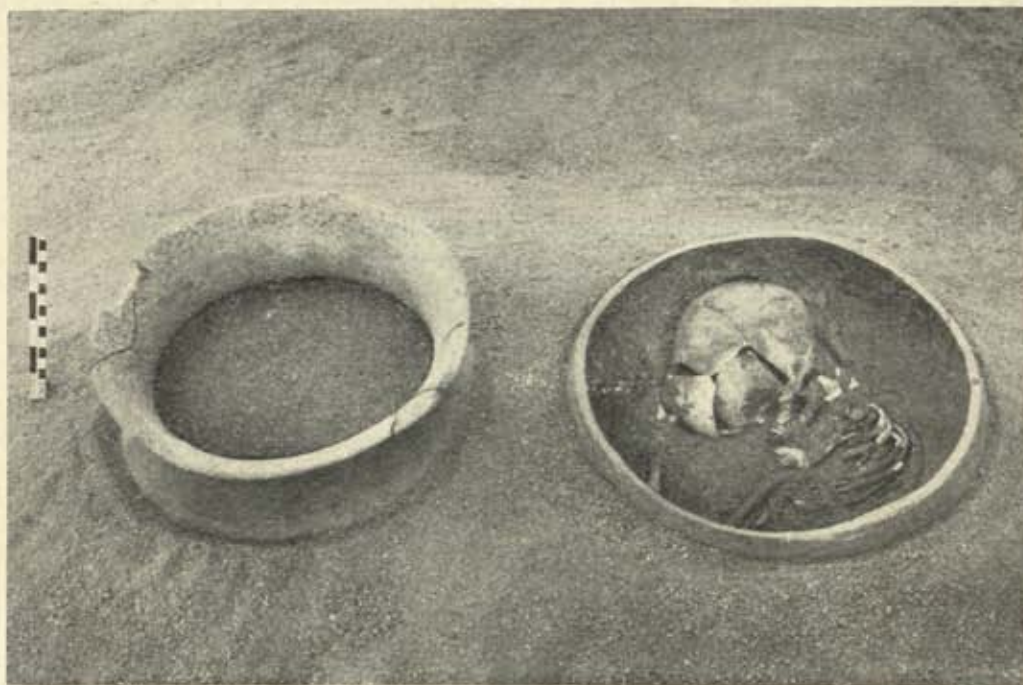


B. Brahmagiri: urn-burial T 43, 'Stone Axe' culture but actually deposited in a stratum of the 'Megalith' culture. (Scale of inches.)



A. Brahmagiri: urn-burials T 38 and T 39, 'Stone Axe' culture





A. *Brahmagiri*: urn-burial no. T 38, 'Stone Axe' culture. (Urn sawn into halves for the extraction of the bones.)



B. Burial on site Br. 17, 'Stone Axe' culture. (A spouted pot has been removed from the head of the skeleton. See pl. CX.)





*Brahmagiri: grave with spouted vessel at the head;  
'Stone Axe' culture (cf. pl. CIX B)*



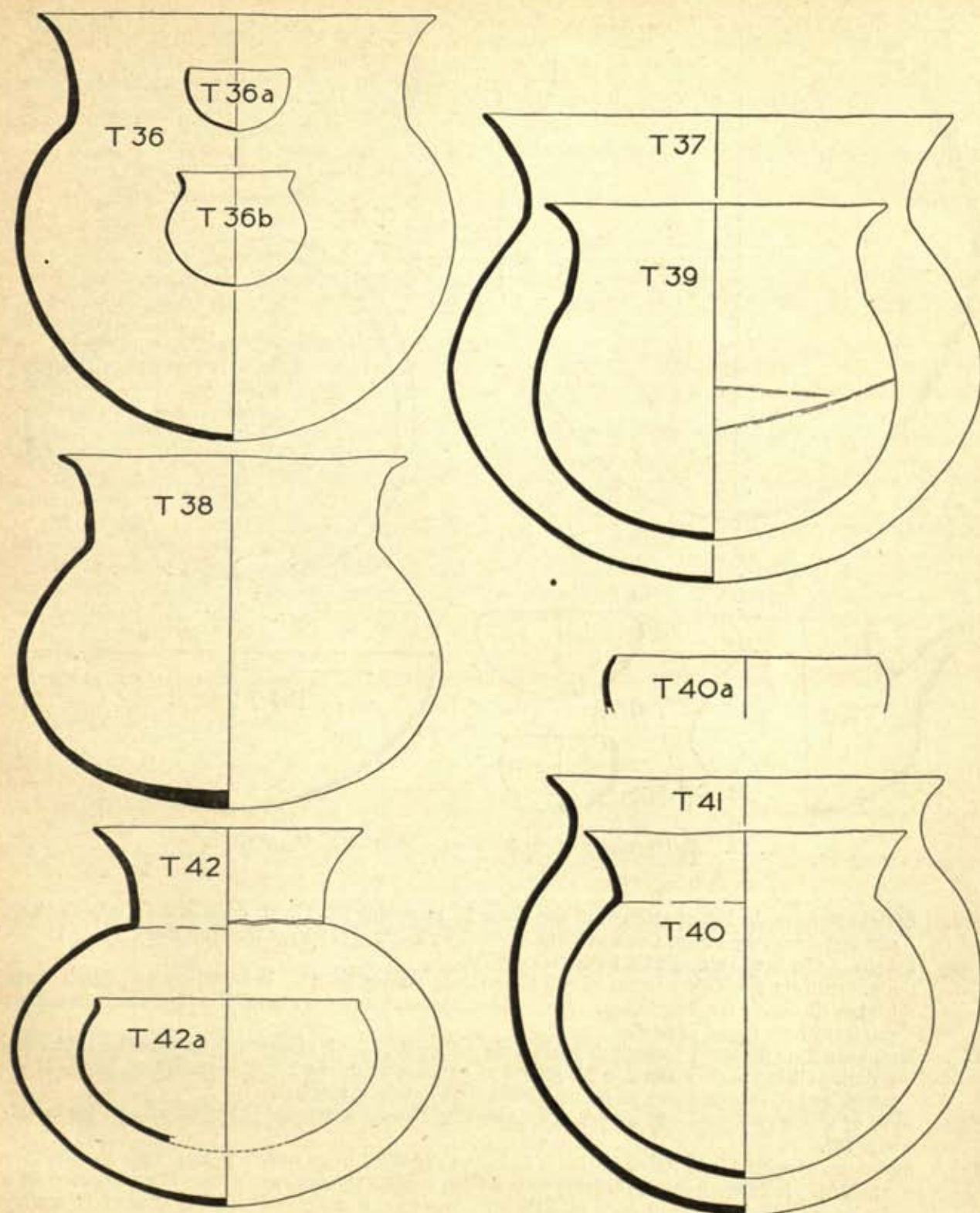


FIG. 20. Burial-urns of the Brahmagiri Stone Axe culture IB.  $\frac{1}{2}$



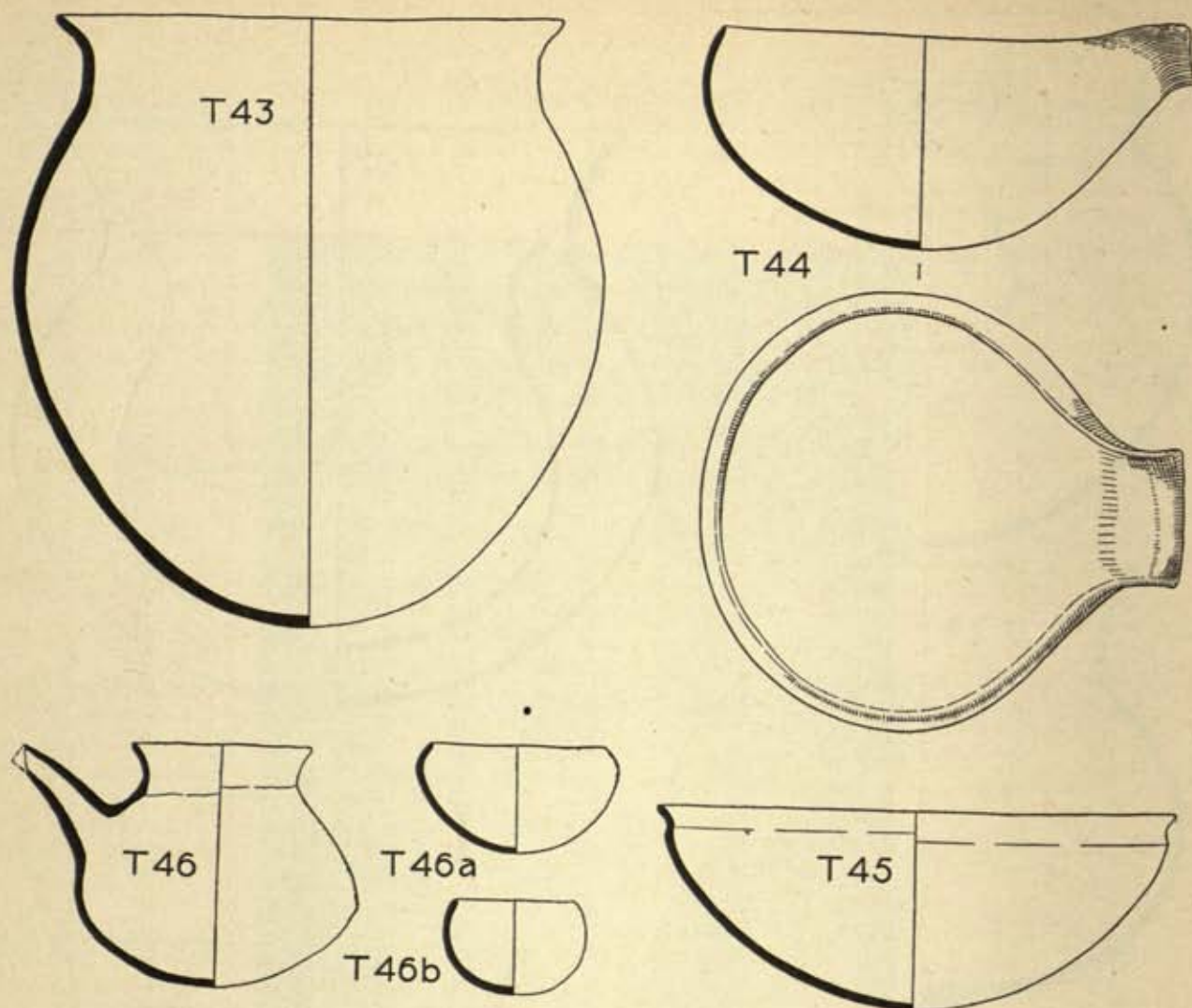


FIG. 21. *Burial-pottery of the Brahmagiri Stone Axe culture IB.*  $\frac{1}{4}$

- T40. Burial-urn from the lowest stratum of sub-phase IB in cutting Br. 17. It contained an infant's skull, ribs and a few long-bones, and was found covered with a bowl (T40a) of the same fabric.
- T40a. Fragment of a bowl used as a lid for burial-urn T40.
- T41. Burial-urn from a middle stratum of sub-phase IB in cutting Br. 17. It contained an infant's skull, broken ribs and a few long bones. Above these lay the fragmentary base of another urn, which must originally have served as a lid.
- T42. Burial-urn from the upper part of sub-phase IB in cutting Br. 17. It differs from the usual type in having a dark polished surface and a weak groove at the base of the neck. It contained the bones of an infant, and was covered with an inverted bowl (T42a) of the same fabric.
- T42a. Bowl of coarse grey ware with an external depression below a sharpened rim, used as a lid for burial-urn T42.
- T43. Burial-urn of special importance in that it had been deposited in an otherwise megalithic stratum (site Br. 22A). It differs from the usual type in having a relatively narrower girth. It was covered with the lower half of another urn (see pl. CIX B). Above a few small bones at the bottom of the urn lay a bowl similar to T36a.



- T44. Lipped bowl of coarse grey ware used as a cover for burial urn no. 4 (not illustrated) in Br. 16B. A similar lipped bowl, but of the black polished megalithic fabric, came from pit-circle VII (see above, p. 216, Type P16).
- T45. Bluntly carinated bowl of coarse grey ware with an appreciable external depression below the rim, used as a lid for a badly broken burial-urn (not illustrated), no. 7 in Br. 17.
- T46. Vessel with funnel-spout, of coarse grey ware, found beside the inhumation burial in a lower stratum of sub-phase IB in cutting Br. 17, along with two small bowls (T46a and b) of similar fabric. The funnelled vessel, for which a possible function has been suggested on p. 203, lay above the broken skull, while the two small bowls were placed near the upper ends of the two femurs (pls. CIX B and CX).

*Note on burial-urns not illustrated*

Burial-urn Br. 17, no. 1, from an upper stratum of sub-phase IB, was fragmentary. It contained the broken skull, some ribs and a few long-bones of a small child. The fragments of a lid, made from part of a bowl, were also obtained.

Burial-urn Br. 17, no. 2, from an upper stratum of sub-phase IB, contained an infant's skeleton. The broken rim of a bowl which had probably been used as a lid was found adhering to the mouth of the urn.

Burial-urn Br. 17, no. 3, from an upper stratum of sub-phase IB, was fragmentary. Only a few small human bones were left at the bottom.

Burial-urn Br. 17, no. 7, from a middle stratum of sub-phase IB, was covered with a greyish black bowl (T45, above). The contents comprised a few small decayed bones.

Burial-urn Br. 17, no. 9, from a lower stratum of sub-phase IB, was badly crushed and only a few small human bones were obtained. A bowl (lid) had collapsed into the urn.

Burial-urn Br. 21, no. 1, from a lower stratum (layer 15) of sub-phase IB, was badly disturbed, only the lower half being available. It contained some much-decayed infant-bones.

Burial-urn Br. 21A, no. 1, from a lower stratum (layer 15) of sub-phase IB, was smaller than the usual type; it had been much disturbed, but retained fragments of a child's skull, a few ribs and some long-bones.

Burial-urn 21A, no. 2, from the lowest stratum of sub-phase IB, was also badly broken. The skeletal remains, which were much decayed, comprised a child's skull and a few long-bones. The urn was covered with an inverted basin.

Burial-urn 16B, no. 3, from a lower stratum (layer 14) of sub-phase IB, contained a few infant-bones.

Burial-urn 16B, no. 4, from the lower part of sub-phase IB, was much disturbed. It contained the bones of an infant, and was covered with a lipped bowl (T44).

*Figs. 22-23*

To supplement the burial-urns, sherds representing the range of types from the occupation-layers of the Stone Axe culture, sub-phase IB, are here added.

- T47. Rim of a large jar of dull grey ware with splayed mouth, similar to the burial-urns. Scratchings on the exterior seem to be due to wiping with a handful of grass during manufacture. This sherd is from a middle stratum of sub-phase IB, but the type recurs throughout.
- T48. Vase of dull grey ware with flaring rim and globular body, a diminutive form of the burial-urn type; from an upper stratum of sub-phase IB.
- T49. Rim of a small vase of black burnished ware with weak grooves round the neck; from a middle stratum of sub-phase IB.
- T50. Rim of a vase of grey ware; from a middle stratum of sub-phase IB.
- T51. Rim of a vase of brownish buff ware; from an upper stratum of sub-phase IB.
- T52. Neck of a bottle-necked vessel of grey ware with widely splayed mouth; from a middle stratum of sub-phase IB.
- T53. Rim of a vessel of grey ware with widely splayed mouth; from a lower stratum of sub-phase IB.
- T54. Sherd of light grey ware with slightly undercut rim; from a lower stratum of sub-phase IB.
- T55. Sherd of dull grey ware with an everted rim; from a lower stratum of sub-phase IB.
- T56. Rim of red ware with internal projection; from a lower stratum of sub-phase IB.
- T57. Simple rim of dull grey ware, roughly scratched before baking; from an upper stratum of sub-phase IB.



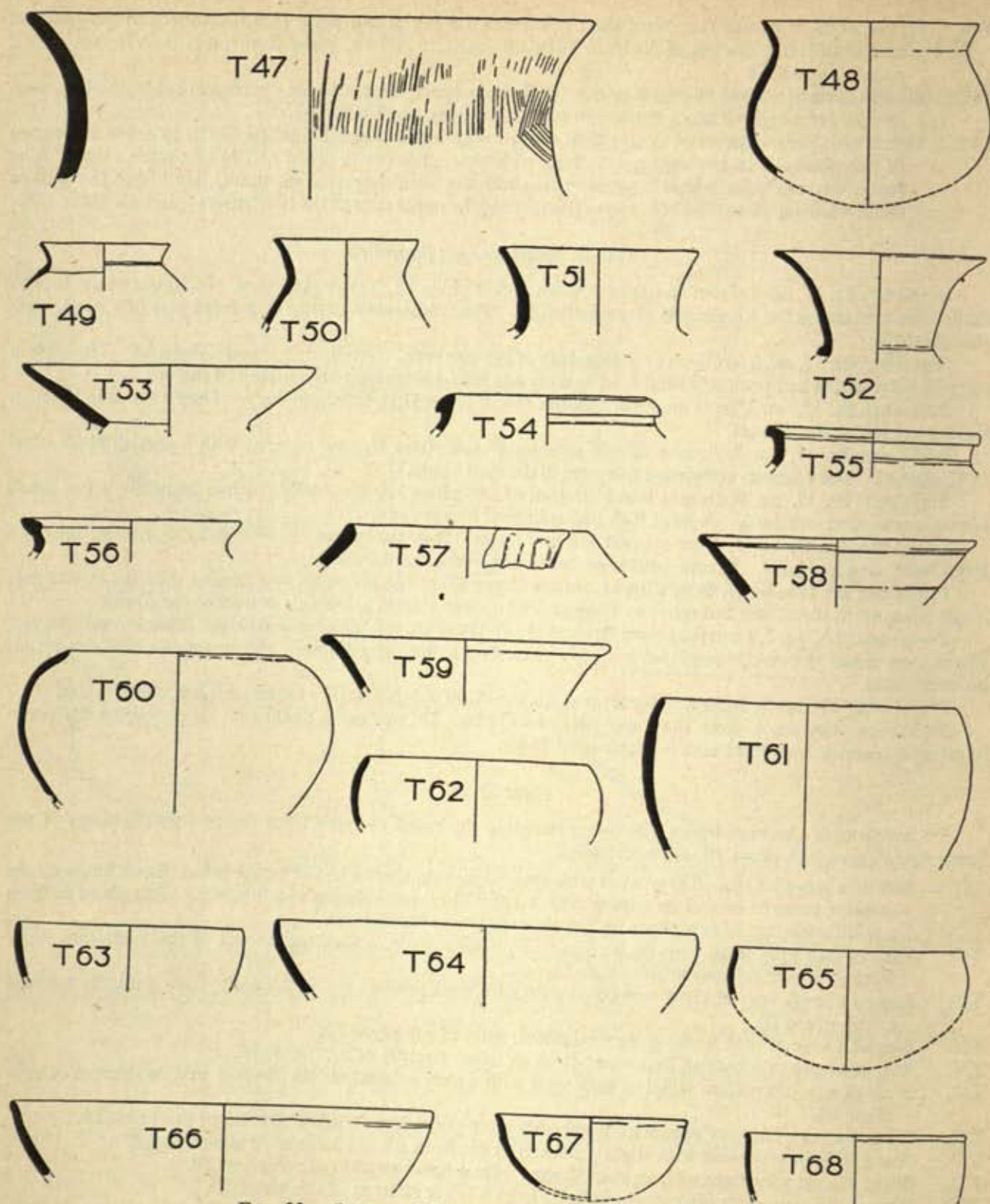


FIG. 22, Pottery of the Brahmagiri Stone Axe culture.  $\frac{1}{4}$



- T58. Fragment of a bowl of black burnished ware with internal and external grooves; from a middle stratum of sub-phase IB.
- T59. Fragment of a bowl of light brown ware with flaring rim; from a lower stratum of sub-phase IB.
- T60. Globular bowl of polished brown-and-black ware with incurved and weakly grooved rim; from an upper stratum of sub-phase IB. The fabric and technique of firing of this and half-a-dozen other sherds from the upper levels of sub-phase IB show some affinity with those of the megalithic ware and may be ascribed to the influence of the latter.
- T61. Bowl of dull grey ware with featureless rim; from the lowest stratum of sub-phase IB. A familiar type throughout this period.
- T62. Fragment of a bowl of polished brown-and-black ware with featureless rim; from an upper stratum of sub-phase IB.
- T63. Fragment of a bowl of black polished ware with featureless rim; from an upper stratum of sub-phase IB.
- T64. Fragment of a bowl of light grey ware with thin sharpened rim, slightly incurved; from a middle stratum of sub-phase IB.
- T65. Fragment of a bowl of dull grey ware with slightly concave profile below a thin sharpened rim; from an upper stratum of sub-phase IB.
- T66. Fragment of a bowl of reddish buff ware with a weak groove below the rim; from an upper stratum of sub-phase IB.
- T67. Bowl of dull grey ware with a slight external depression below the rim; from a middle stratum of sub-phase IB.
- T68. Fragment of a bowl of black polished ware with slightly beaded rim; from an upper stratum of sub-phase IB.

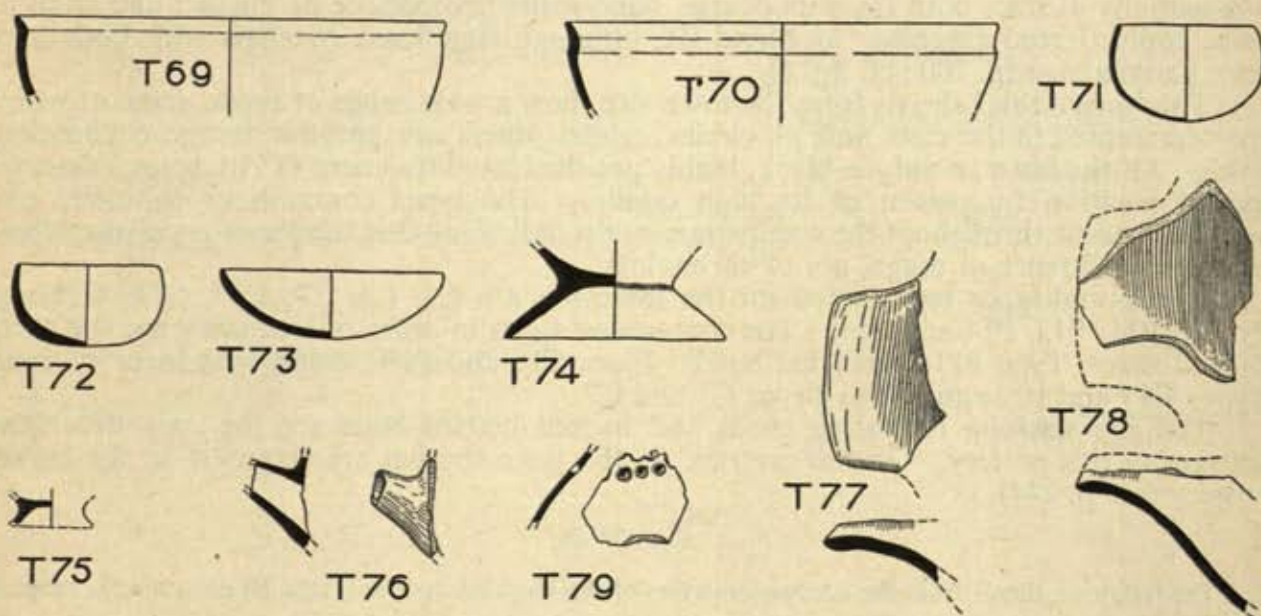


FIG. 23. Pottery of the Brahmagiri Stone Axe culture.  $\frac{1}{4}$

- T69. Fragment of a bowl of black polished ware with slightly out-turned rim; from an upper stratum of sub-phase IB.
- T70. Fragment of a bowl of black polished ware with carinated shoulder; from an upper stratum of sub-phase IB.
- T71. Small bowl of dull grey ware with thin sharpened rim and rounded base; from an upper stratum of sub-phase IB.
- T72. Small bowl of dull grey ware with thin sharpened rim, thick sides and flat base; from an upper stratum of sub-phase IB.



- T73. Shallow bowl of dull grey ware with thin sharpened rim and rounded base; from a lower stratum of sub-phase IB.
- T74. Fragment of a pedestal of black polished ware from an upper stratum of sub-phase IB. It is characterized by a red-ochre band painted round the junction of the base and the body, and a red-ochre spot in the centre of the underside of the base.
- T75. Fragment of a pedestal of black ware, slightly polished; from a middle stratum of sub-phase IB.
- T76. Fragment of a funnel-spout of black polished ware from the lowest stratum of sub-phase IB. Similar funnels occur throughout the Stone Axe culture but are more common in the lower than in the upper levels.
- T77. Fragment of a lipped spout of dull grey ware; from a lower stratum of sub-phase IB. Lipped spouts are fairly frequent throughout this period.
- T78. Fragment of a lipped spout of polished brown-and-black ware; from an upper stratum of sub-phase IB.
- T79. Sherd of dull grey ware, perforated before firing; from an upper stratum of sub-phase IB. Only one other perforated sherd was found in the débris of this culture. The shape of the complete vessel is unknown.

### *Pottery of the Brahmagiri Megalith culture*

The pottery from Phase II of the town-site is characterized by the distinctive 'megalithic' fabric. It was turned on the slow wheel and has a polished and brightly coloured black-and-red or all-black surface (above, p. 208). This evolved ceramic industry is essentially distinct both from its coarse, hand-made predecessor of Phase I and from its more sophisticated successor of Phase III, although significant overlaps with both have been noted above (p. 200; cf. fig. 8).

The 'megalithic' sherds from the town-site show a wide range of types, some of which are represented in the cists and pit-circles, whilst others are peculiar to the occupation-levels. Of the latter, a unique black, highly polished bowl-fragment (T110, below) deserves special mention by reason of its high quality. The types common to town-site and megaliths occur throughout the occupation-levels, indicating that the forms peculiar to these represent difference of usage, not of chronology.

The burial-types represented on the town-site are C1, C3, C7, C13, C14, C19 and P1, P3, P11, P13, P14 and P19. The commonest types in order of frequency are the tulip-shaped vases, Type P11; carinated bowls, Types C19 and P19; dishes with incurved rims, Types C13 and P13; and bowl Types C1 and C7.

Oblique slashing (imitating cord) and incised herring-bone are the only decorative features of this pottery. Graffiti are rare on the town-site but are common on the burial-pottery (see p. 244).

### Figs. 24-26

The following sherds from the occupation-layers of the Megalith culture (Phase II) illustrate the range of types.

- T80. Bowl of polished black-and-red ware with sharpened rim, analogous to megalithic type C1; from a lower stratum of Phase II. A common type.
- T81. Bowl of polished black-and-red ware with sharpened rim and a groove round the body, comparable with megalithic type C2; from a lower stratum of Phase II.
- T82. Bowl of polished black-and-red ware with sharpened rim, distinguished by external grooves on the body; from a lower stratum of Phase II.
- T83. Small bowl of polished black-and-red ware with sharpened rim, bulged body and external grooves, comparable with megalithic type C3e; from a lower stratum of Phase II.
- T84. Bowl of black polished ware with externally grooved rim, comparable with megalithic type C3; from a lower stratum of Phase II.



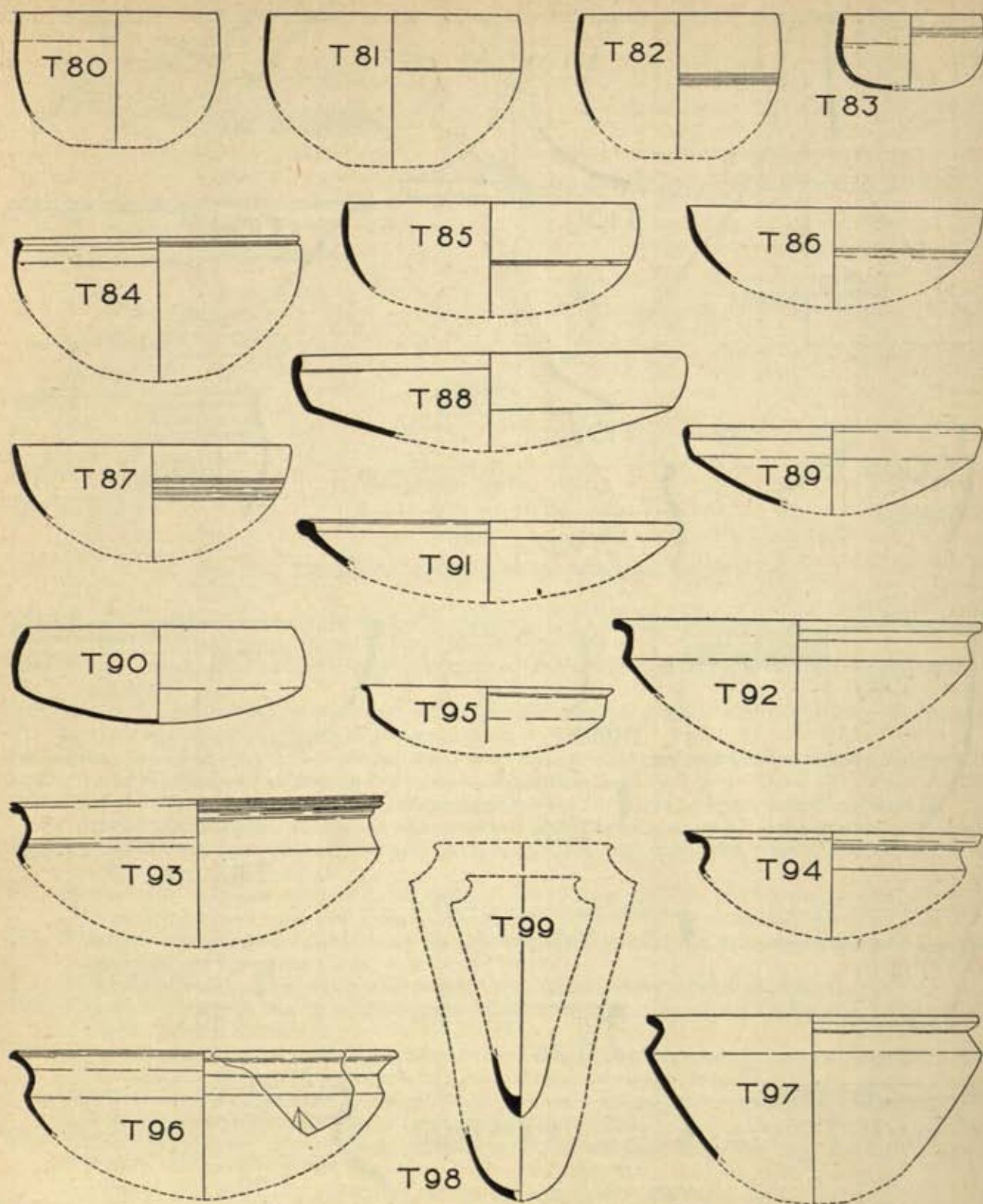


FIG. 24. 'Megalithic' pottery from the Brahmagiri town-site.  $\frac{1}{4}$



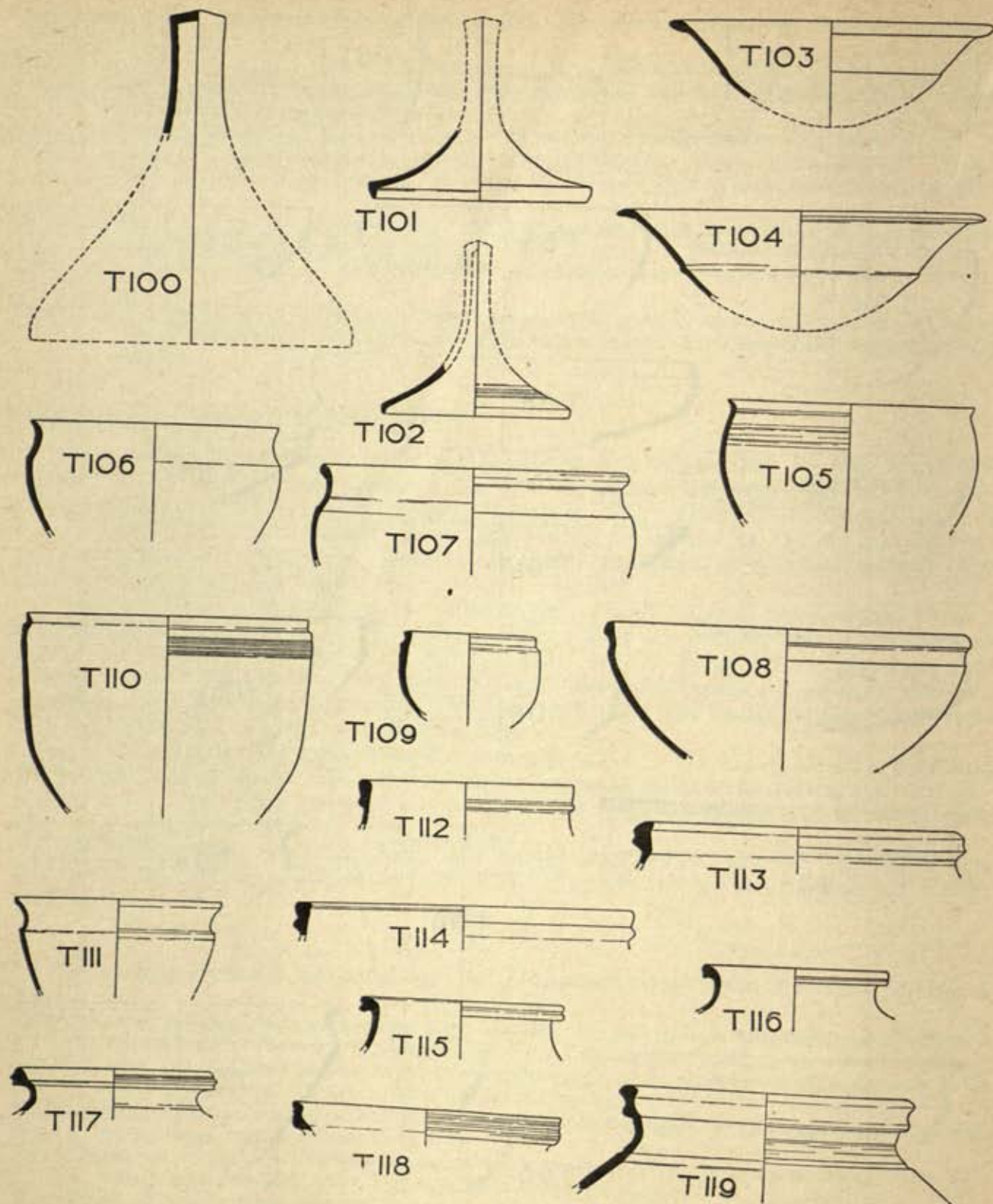


FIG. 25. 'Megalithic' pottery from the Brahmagiri town-site.  $\frac{1}{4}$



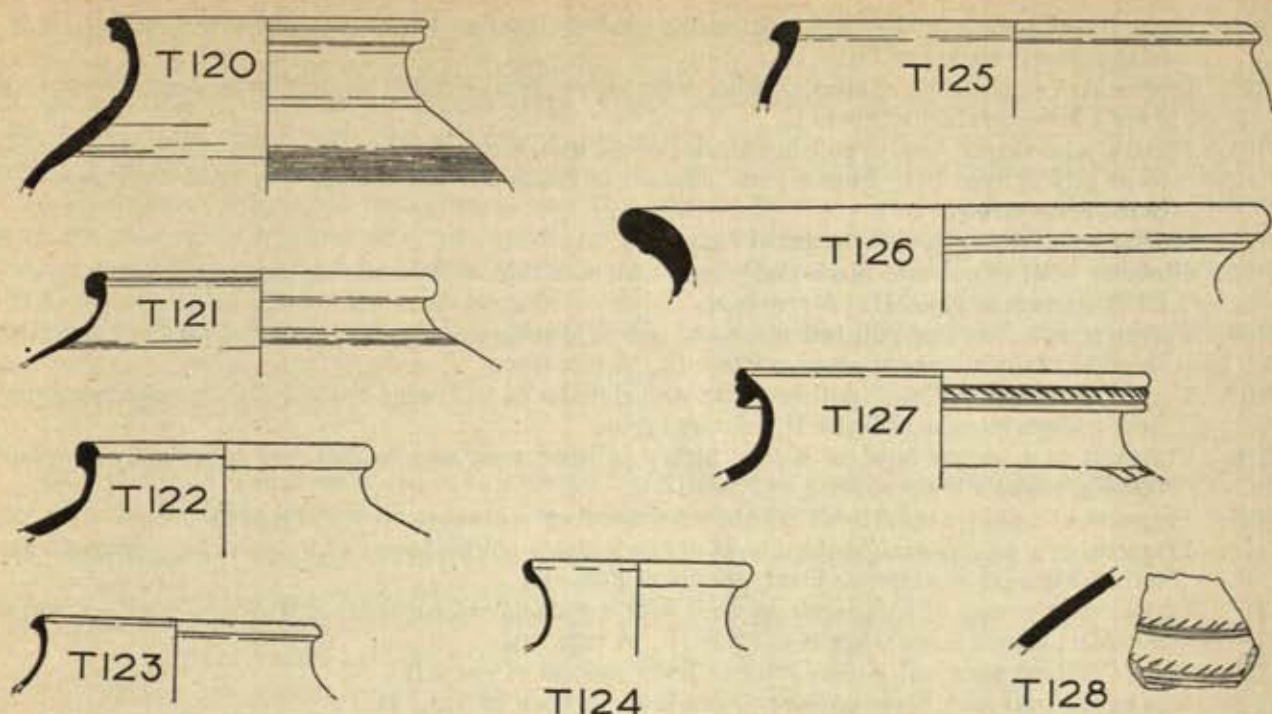


FIG. 26. 'Megalithic' pottery from the Brahmagiri town-site.  $\frac{1}{4}$

- T85. Bowl of polished black-and-red ware with sharpened rim and external groove, analogous to megalithic type C7; from a lower stratum of Phase II. A common type.
- T86. Bowl of polished black-and-red ware with sharpened rim and two external grooves; from a lower stratum of Phase II.
- T87. Bowl of polished black-and-red ware with sharpened rim and multiple external grooves, comparable with megalithic type C8a; from a lower stratum of Phase II.
- T88. Dish of polished black-and-brown ware with a slightly incurved rim, analogous to megalithic types C13 and P13; from a lower stratum of Phase II. A common type.
- T89. Dish of polished black-and-red ware, of deeper form than T88; from an upper stratum of Phase II.
- T90. Dish of polished black-and-red ware with carination and incurved rim; from a lower stratum of Phase II.
- T91. Dish of dull red ware with a heavy rolled rim, comparable with megalithic types C14 and P14; from a lower stratum of Phase II.
- T92. Fragment of carinated bowl of black highly polished ware with an everted rim, comparable with megalithic types C19 and P19; from a lower stratum of Phase II. A common type.
- T93. Fragment of a carinated bowl of black polished ware with grooved rim, reconstructed from megalithic types C19 and P19; from a lower stratum of Phase II.
- T94. Fragment of a carinated bowl of black polished ware; from a lower stratum of Phase II.
- T95. Fragment of a small, bluntly carinated bowl of black polished ware with a slightly everted rim; from a lower stratum of Phase II.
- T96. Fragment of a carinated bowl of black-and-brown ware with an everted rim, internally grooved, and bearing a post-firing graffito on the body; from an upper stratum of Phase II.
- T97. Fragment of a deep carinated bowl of black polished ware with an everted rim, comparable with megalithic type P19a; from a lower stratum of Phase II.
- T98. Base of an elongated vase of black polished ware, restored from megalithic type P1; from a lower stratum of Phase II. A rare type.
- T99. A diminutive form of the previous type; from a lower stratum of Phase II.
- T100. Fragment of a conical lid of black polished ware, restored from megalithic type P3; from a lower stratum of Phase II. A rare type.



- T101. Fragment of a conical lid of black polished ware with incurved lip, restored from megalithic type P3; from a lower stratum of Phase II.
- T102. Fragment of a conical lid of black polished ware with external grooves, restored from megalithic type P3; from a lower stratum of Phase II.
- T103. Shallow tulip-shaped bowl of polished black-and-red ware with a median ledge round the body, analogous to megalithic type P11; from a lower stratum of Phase II. A common megalithic type, especially in the lower strata.
- T104. Similar bowl; from a lower stratum of Phase II.
- T105. Globular bowl of polished black-and-brown ware with thin, everted rim and internal grooves; from a lower stratum of Phase II. A rare type.
- T106. Fragment of a bowl of polished black-and-red ware with globular body, everted rim and carinated shoulder; from a lower stratum of Phase II. A rare type.
- T107. Fragment of a bowl of black polished ware with globular body, beaded rim and slightly ridged shoulder; from a lower stratum of Phase II. A rare type.
- T108. Fragment of a unique bowl of brown, highly polished ware with beaded rim and bluntly carinated shoulder; from a lower stratum of Phase II.
- T109. Fragment of a unique small bowl of light red ware; from a lower stratum of Phase II.
- T110. Fragment of a unique straight-sided bowl of black highly polished ware with thin walls, sharpened rim, and multiple grooves; from a lower stratum of Phase II.
- T111. Fragment of a vase of black-and-red ware with a pronounced concavity of the sides above a ledged shoulder; from a lower stratum of Phase II. A rare type.
- T112. Rim of dull red ware with cordon; from a lower stratum of Phase II.
- T113. Rim of red ware with heavy groove; from a lower stratum of Phase II.
- T114. Thick grooved rim of red ware; from a lower stratum of Phase II.
- T115. Grooved rim of brown ware; from a lower stratum of Phase II.
- T116. Grooved rim of red ware; from a lower stratum of Phase II.
- T117. Multigrooved rim of red ware with a slight cordon on the neck; from an upper stratum of Phase II.
- T118. Multigrooved rim of dull brown ware; from a lower stratum of Phase II.
- T119. Vessel of dark brown ware with heavy, grooved rim and corrugated neck; from a lower stratum of Phase II.
- T120. Vessel of brown-and-black ware with grooved rim, a slight cordon round the neck, and a multigrooved shoulder; from a lower stratum of Phase II.
- T121. Vessel of red ware with heavy internally grooved rim and grooved shoulder; from a lower stratum of Phase II.
- T122. Vessel of red ware with internally beaked rim; from a lower stratum of Phase II.
- T123. Vessel of red ware with nail-head rim; from a lower stratum of Phase II.
- T124. Vessel of red ware, externally beaded and internally grooved; from a lower stratum of Phase II.
- T125. Vessel of brown-and-black ware with clubbed rim; from a lower stratum of Phase II.
- T126. Thick everted rim of red ware with a slight beading; from a lower stratum of Phase II.
- T127. Rim of red ware with oblique incisions on the rim and shoulder; from a lower stratum of Phase II. Fillets of cord-like impressions on the rim are a feature of the red-ware pots from the pit-circles.
- T128. Sherd of polished red ware with oblique incisions above bands of grooves; from a lower stratum of Phase II.

### *Pottery of the Brahmagiri 'Āndhra' culture*

Pottery from Phase III or the 'Āndhra' culture of the town-site is relatively sophisticated, and is distinguished technically from the megalithic ware of Phase II by the use of the fast wheel and frequently by salt-glazing. The occurrence of 'rouletted ware' in and above the lowest of the Āndhra levels provides a firm datum-line in the first century A.D. (see p. 200). The characteristic pottery of this culture is decorated with varieties of simple rectilinear or slightly curvilinear pattern in a paste of kaolin or lime under a wash



of russet-coloured ochre.<sup>1</sup> The principal patterns include criss-cross lines, oblique rows of loops, simple oblique strokes, radiating lines, and rows of dots. Of these, the predominant motif is that of vertical or criss-cross lines (pl. CXII and fig. 27). This yellow-painted ware is fairly abundant on other Āndhra sites (see below, p. 308). At Chandravalli, it exhibits a greater wealth of pattern than at the lesser site of Brahmagiri.

The two commonest types on which this characteristic decoration is found are dishes with an internally beaked rim, and partially straight-sided bowls. The former occasionally bear concentric rings of rouletted pattern on the upper side of the base. The straight-sided bowls seem to be an inheritance from the simpler ceramic of the Megalith culture. A local dull grey ware with grooves and elementary incised decoration runs parallel with the painted fabrics but attains its maturity in the upper levels, when the painted wares are on the wane.

#### PL. CXI

The plate illustrates seven of the eight rouletted fragments found in the recent Brahmagiri excavations; the sherd not illustrated comes from an upper Āndhra level (layer 3 of fig. 8).

- 1-4. Sherds with the rouletted pattern; from the lowest Āndhra level (layer 6 of fig. 8).
5. Sherd with rouletted pattern; from a lower Āndhra level (layer 5 of fig. 8).
6. Dish with an incurved rim, bearing two rows of fine rouletting, corresponding to Arikamedu Type 1; from a lower Āndhra level (layer 5 of fig. 8). See also fig. 27, T129.
7. Sherd with two rows of rouletted pattern; from a lower Āndhra level (layer 5 of fig. 8).

#### PL. CXII

A representative selection of Āndhra yellow-painted pots, in the technique described above, is here illustrated.

1. Rim of Type T137 (fig. 27) painted with criss-cross pattern; from a lower stratum of Phase III (fig. 8, level 6).
2. Rim of Type T137 (fig. 27) painted with oblique lines; from a lower stratum of Phase III (fig. 8, level 5).
3. Rim of Type T137 (fig. 27) painted with criss-cross pattern; from a lower stratum of Phase III (fig. 8, level 6).
4. Same as T135 (fig. 27).
5. Same as T133 (fig. 27).
6. Rim of Type T133 (fig. 27) painted with trellis pattern; from a lower stratum of Phase III (fig. 8, level 5).
7. Rim of Type T130 (fig. 27) painted with oblique lines; from an upper stratum of Phase III (fig. 8, level 3).
8. Sherd painted with oblique lines; from an upper stratum of Phase III (fig. 8, level 4).
9. Sherd painted with radiating lines; from an upper stratum of Phase III (fig. 8, level 4).
10. Rim of Type T131 (fig. 27) painted with vertical comb pattern; from an upper stratum of Phase III (fig. 8, level 4).
11. Sherd with notches, painted with a frond-like pattern; from an upper stratum of Phase III (fig. 8, level 3).

<sup>1</sup> The Archaeological Chemist notes as follows in regard to the technique of the Āndhra painted ware: 'The designs of these seem to have been executed by first applying a thin paste of kaolin or lime, producing white parallel or crossed bands, and then applying a wash of red-ochre. The red pigment shows a network of cracks under the microscope. This crackle or crazing indicates that the pots were probably salt-glazed. When the fuel has nearly burnt out and the pots are red-hot, common salt is thrown into the kiln. In the intense heat the salt volatilizes and, by chemically reacting on the surface of the pots, produces the glaze. The glazing effect is therefore superficial. With the exception of iron, no colouring-material is present. Lead, phosphate, etc., which are the usual constituents of glaze, are absent.'



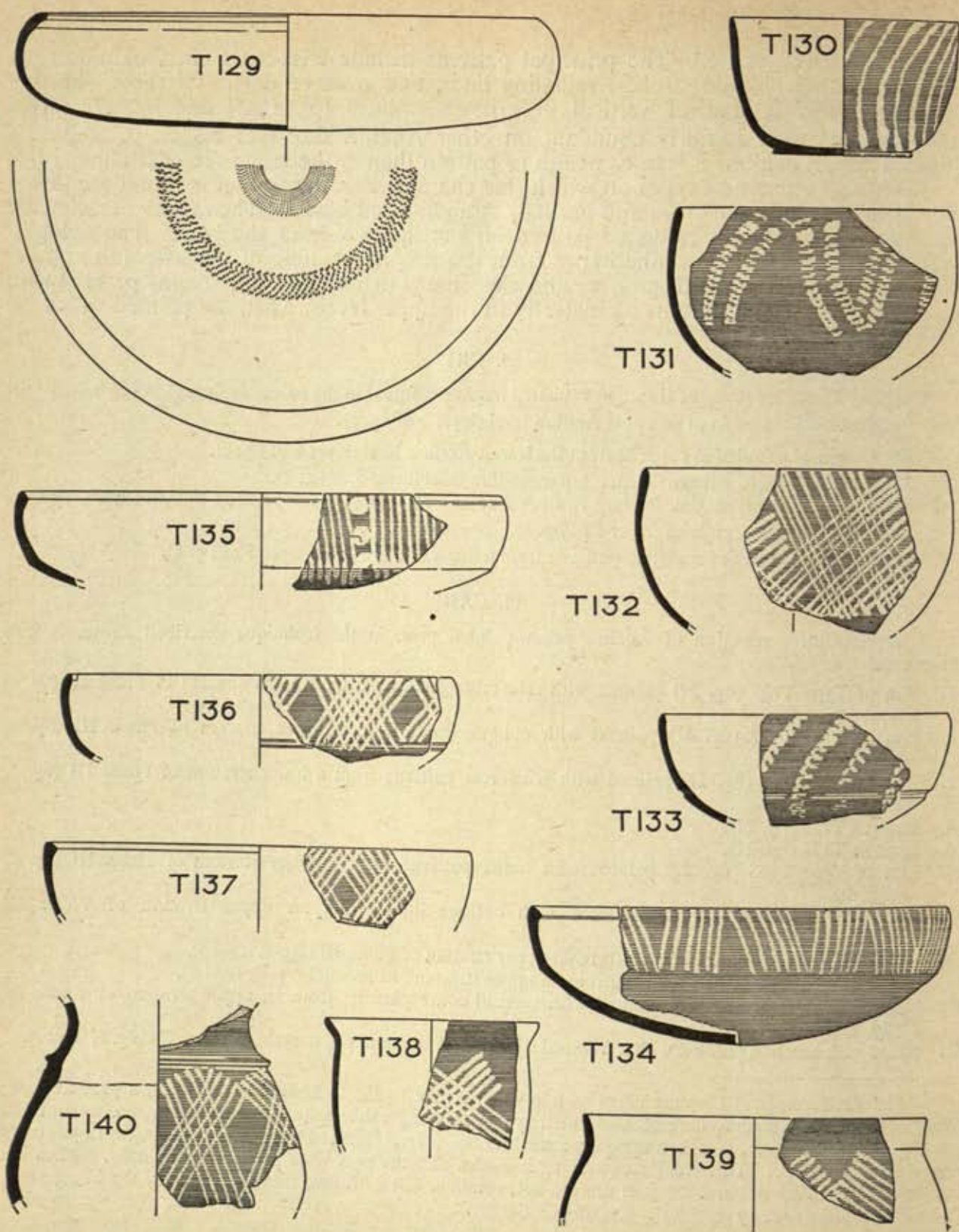


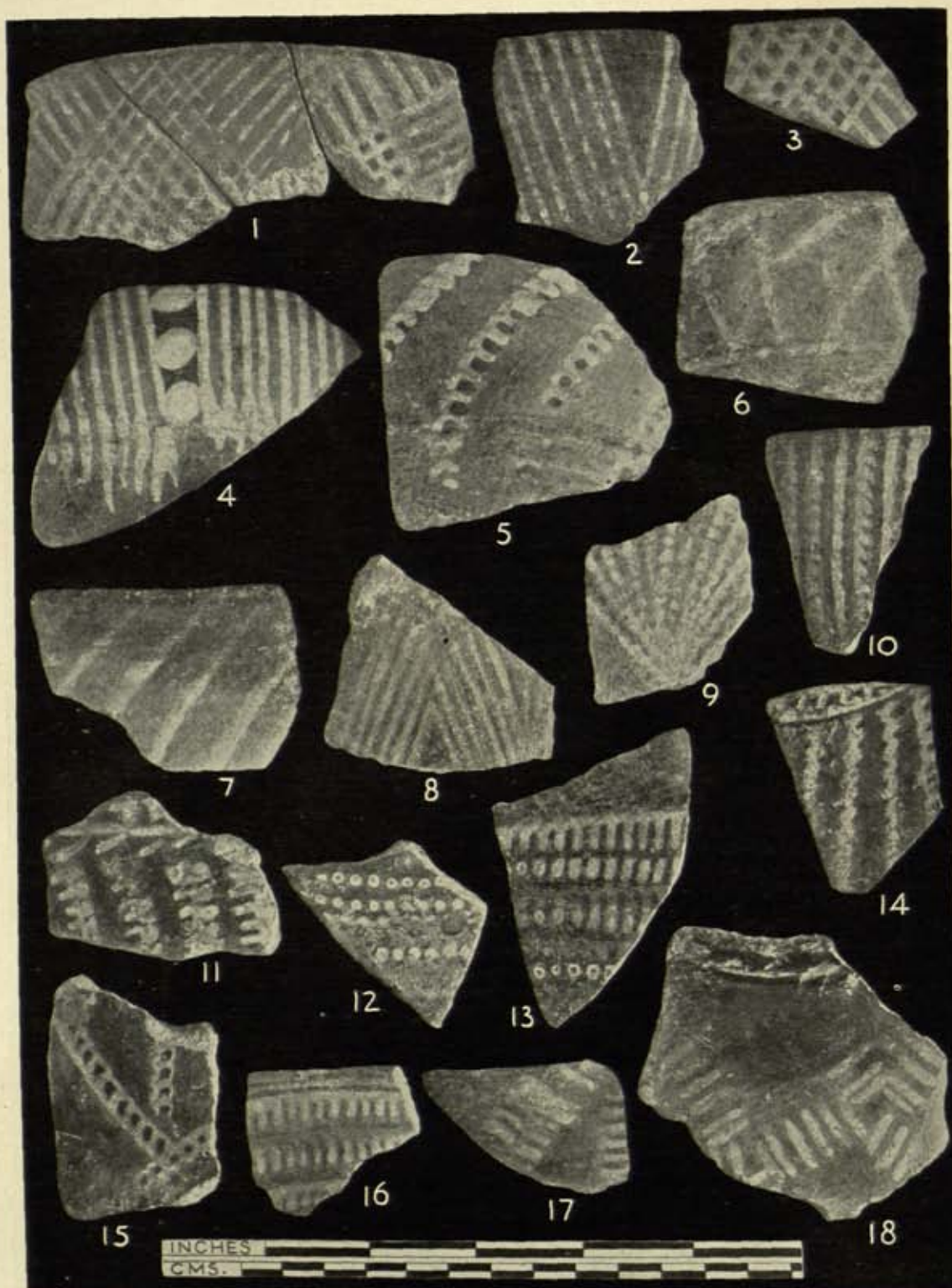
FIG. 27. Brahmagiri: 'Āndhra' pottery.  $\frac{1}{2}$





*Brahmagiri: rouletted ware*





*Brahmagiri; yellow-painted 'Andhra' pottery*



12. Sherd painted with horizontal rows of dots; from an upper stratum of Phase III (fig. 8, level 3).
13. Sherd painted with horizontal comb-pattern; from an upper stratum of Phase III (fig. 8, level 3).
14. Sherd with notches, painted with vertical wavy lines; from a lower stratum of Phase III (fig. 8, level 5).
15. Sherd painted with ladder-pattern; from a lower stratum of Phase III (fig. 8, level 5).
16. Rim of Type T137 (fig. 27) painted with horizontal comb-pattern; from a lower stratum of Phase III (fig. 8, level 5).
17. Rim of Type T130 (fig. 27) painted with frond-like pattern; from a lower stratum of Phase III (fig. 8, level 6).
18. Sherd painted with zig-zag pattern; from an upper stratum of Phase III (fig. 8, level 5).

Fig. 27

Further examples of 'Āndhra' yellow-painted ware are here illustrated.

- T129. Dish of polished grey ware with black slip inside and on outer base and light brown externally with an internally beaked rim and with two rows of fine rouletting on the inner side of the base. This and six other sherds of rouletted ware were found in the two lowest of the Āndhra levels (fig. 8, layers 5 and 6) and one in a higher level (layer 3). See also pl. CXI.
- T130. Partially straight-sided bowl of black-and-red ware, salt-glazed, with sharpened rim and disc base; painted with oblique beads. From a lower stratum of Phase III.
- T131. Bowl of black-and-red ware, salt-glazed, with sharpened rim; painted with a double-zigzag pattern of wavy strokes. From a lower stratum of Phase III.
- T132. Bowl of black-and-red ware, salt-glazed, with sharpened rim; painted with criss-cross pattern. From a lower stratum of Phase III.
- T133. Small bowl of black-and-red ware, salt-glazed, with sharpened rim and external groove; painted with oblique rows of loops. From a lower stratum of Phase III.
- T134. Bluntly carinated dish of black-and-red ware with an internally beaked rim; painted with groups of oblique strokes. From a lower stratum of Phase III.
- T135. Bluntly carinated dish of black-and-red ware, salt-glazed, with an internally beaked rim; painted with oblique bands interspersed with bosses. From a lower stratum of Phase III.
- T136. Dish of black-and-red ware, salt-glazed, with external grooves; painted with criss-cross pattern. From an upper stratum of Phase III.
- T137. Fragment of a dish of black-and-red ware, salt-glazed with an internally beaked rim; painted with criss-cross pattern. From an upper stratum of Phase III.
- T138. Partially straight-sided bowl of black-and-red ware, salt-glazed, with an everted rim; painted with criss-cross pattern. From a lower stratum of Phase III.
- T139. Fragment of a globular bowl of black-and-red ware, salt-glazed with a slightly everted rim; painted with slanting strokes. From a lower stratum of Phase III.
- T140. Fragment of a pot-bellied vessel of black-and-red ware, salt-glazed, with a cordon round the shoulder; painted with criss-cross pattern. From a lower stratum of Phase III.

Figs. 28-30

The following pots and sherds from the occupation-layers of the Āndhra culture illustrate the range of the unpainted types.

- T141. Dish with incurved rim, of slipped and polished grey ware, black inside and on outer base and light brown on the outer sides; from a lower stratum of Phase III (fig. 8, level 5). A common type, to which rouletted decoration is sometimes applied. The type is also distinctive of the Arikamedu culture.<sup>1</sup>
- T142. Dish of red ware with red slip; from a lower stratum of Phase III (fig. 8, level 5).
- T143. Dish of slipped grey ware, possibly salt-glazed; black inside and brown outside; internally beaked rim; from a lower stratum of Phase III (fig. 8, level 4).

<sup>1</sup> *Ancient India*, no. 2 (1946), pp. 45ff.



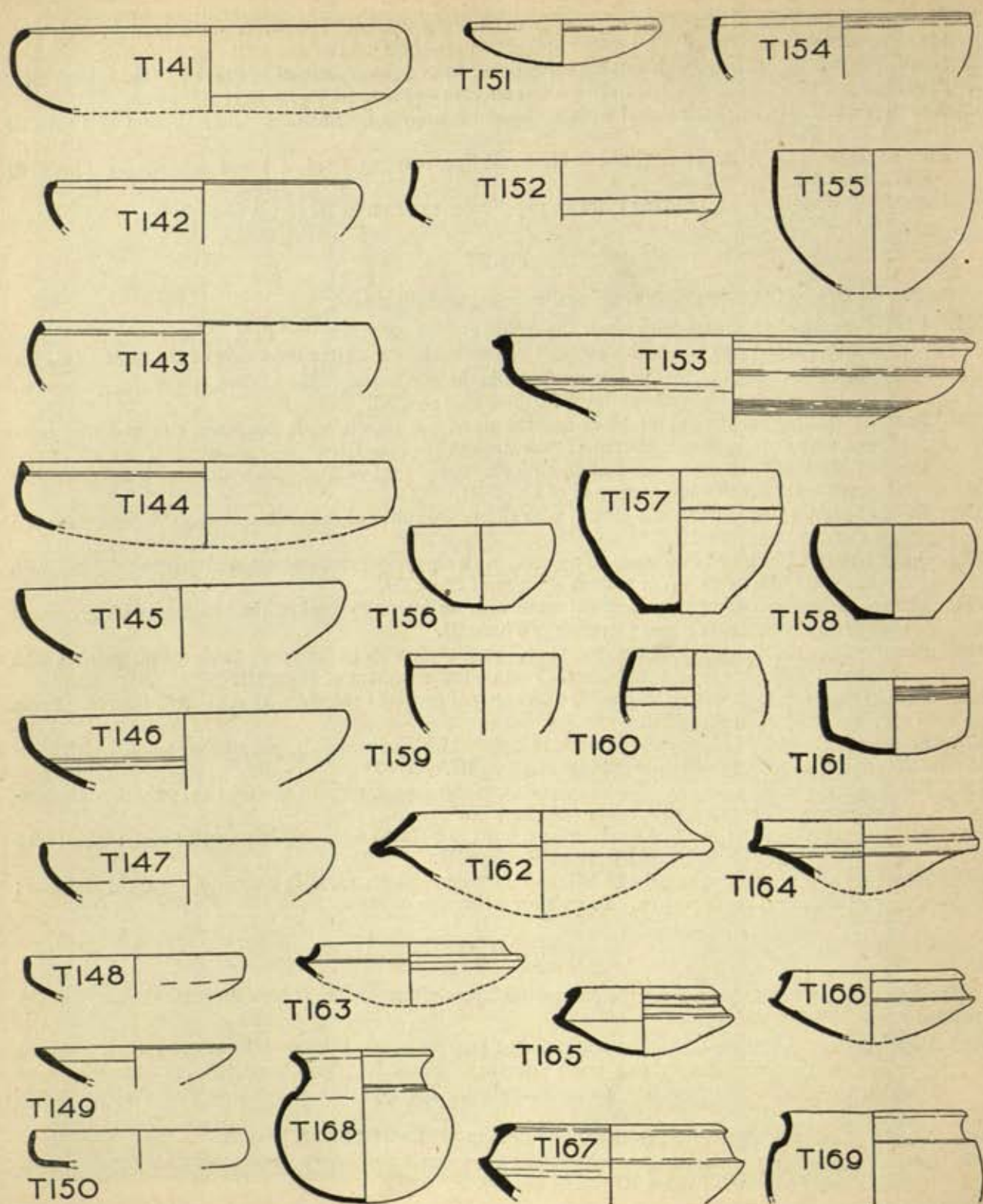


FIG. 28. *Brahmagiri: 'Āndhra' pottery.*  $\frac{1}{4}$



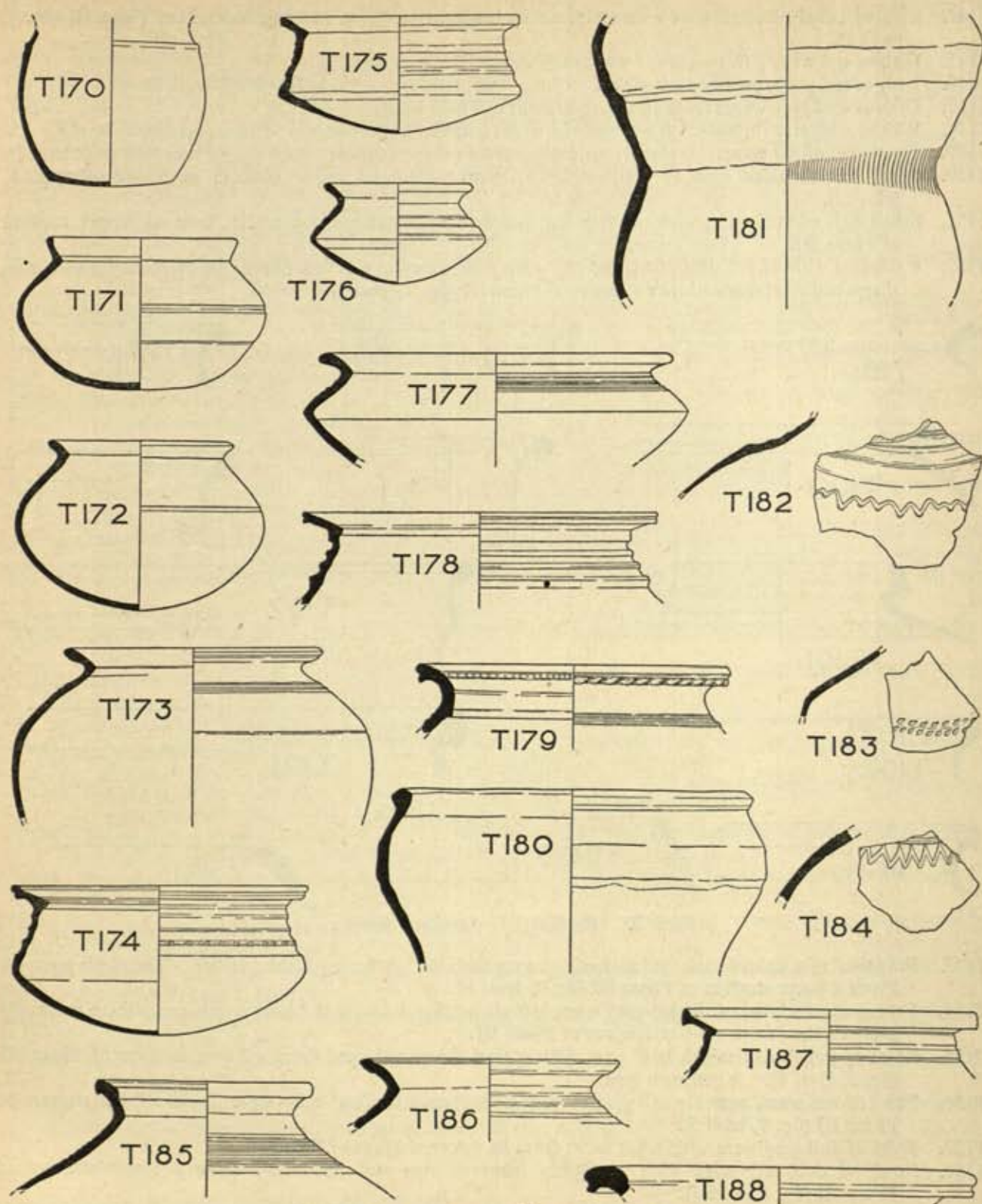


FIG. 29. Brahmagiri: 'Āndhra' pottery.  $\frac{1}{4}$



- T144. Dish of polished black ware with an internally beaked rim; from an upper stratum of Phase III (fig. 8, level 3).  
 T145. Dish of red ware; from a lower stratum of Phase III (fig. 8, level 5).  
 T146. Dish of red ware, possibly salt-glazed; from a lower stratum of Phase III (fig. 8, level 5).  
 T147. Dish of dull grey ware; from an upper stratum of Phase III (fig. 8, level 3).  
 T148. Rim of a bluntly carinated dish of dull red ware; from an upper stratum of Phase III (fig. 8, level 3).  
 T149. Small dish of red ware, salt-glazed, with thickened rim; from a lower stratum of Phase III (fig. 8, level 5).  
 T150. Small straight-sided dish of polished brown ware; from an upper stratum of Phase III (fig. 8, level 2c).  
 T151. Small dish of buff ware, with red slip only on the inside, externally grooved; from an upper stratum of Phase III.  
 T152. Carinated dish of polished black-and-red ware with a concave profile above the carination and a thin sharpened rim; from a lower stratum of Phase III (fig. 8, level 5).

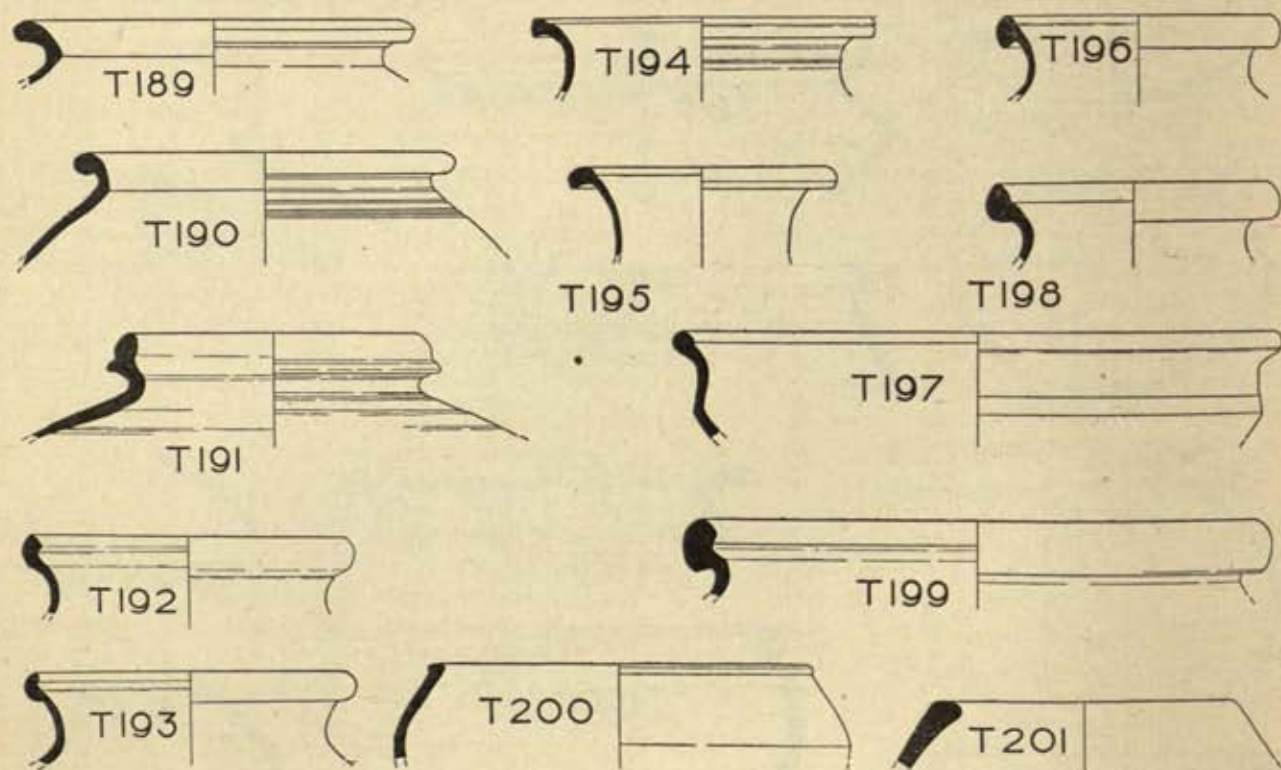


FIG. 30. Brahmagiri: 'Andhra' pottery.  $\frac{1}{4}$

- T153. Fragment of a unique carinated dish of red ware with red slip having black patches. The rim is grooved. From a lower stratum of Phase III (fig. 8, level 6).  
 T154. Fragment of a bowl of slipped grey ware, salt-glazed, black inside and brown outside, with an externally grooved rim; from a lower stratum of Phase III.  
 T155. Bowl of polished blackish buff ware with a thin sharpened rim; from a lower stratum of Phase III (fig. 8, level 6). A common type.  
 T156. Bowl of red ware, possibly salt-glazed, with a sharpened rim and a flat base; from a lower stratum of Phase III (fig. 8, level 5).  
 T157. Bowl of dull grey ware with a flat base; from an upper stratum of Phase III.  
 T158. Bowl of dull red ware with a slightly incurved rim and flat base; from a lower stratum of Phase III (fig. 8, level 5).  
 T159. Bowl of polished and slipped grey ware, possibly salt-glazed, black inside and red outside, with an internally levelled rim; from an upper stratum of Phase III (fig. 8, level 3). A rare type.



- T160. Fragment of a globular bowl of black ware, externally polished; from a lower stratum of Phase III (fig. 8, level 4).
- T161. Bowl of dull grey ware, roughly potted, externally grooved below the rim; from an upper stratum of Phase III. A rare type.
- T162. Lid of dull brown ware with a flanged waist; from an upper stratum of Phase III (fig. 8, level 3). A common type. Lids of an analogous type are common at Arikamedu.<sup>1</sup>
- T163. Lid of red ware, salt-glazed, with a flanged waist; from a lower stratum of Phase III (fig. 8, level 5).
- T164. Carinated lid of dull red ware; from an upper stratum of Phase III (fig. 8, level 3).
- T165. Lid of dull grey ware with a flanged waist; from an upper stratum of Phase III (fig. 8, level 2c).
- T166. Lid of dull grey ware with a flanged waist; from an upper stratum of Phase III (fig. 8, level 2c).
- T167. Lid of dull red ware with a flanged waist; from an upper stratum of Phase III (fig. 8, level 3).
- T168. Globular vessel of dull grey ware with ledged shoulder and rounded base; from an upper stratum of Phase III (fig. 8, level 3).
- T169. Fragment of a vessel of dull grey ware with ledged shoulder; from a lower stratum of Phase III (fig. 8, level 5).
- T170. Lower portion of a vessel of dull grey ware with a cord round the shoulder and sagger base; from an upper stratum of Phase III (fig. 8, level 3).
- T171. Globular vessel of black-and-red ware with internally hollowed rim and external grooves; from a lower stratum of Phase III.
- T172. Globular vessel of grey ware with sharply out-turned rim and an external groove; from a lower stratum of Phase III.
- T173. Fragment of a globular vessel of black ware, possibly salt-glazed, with grooved shoulder and body; from a lower stratum of Phase III.
- T174. Vessel of dull grey ware, probably cooking vessel, with soot-stained exterior. It has a flanged, externally grooved rim, a corrugated shoulder, with a band of notches, and a rounded base; from an upper stratum of Phase III (fig. 8, level 2c). This type with variations is fairly abundant in the upper Andhra levels.
- T175. Carinated vessel of dull grey ware with a flanged rim, a corrugated body and a rounded base; from an upper stratum of Phase III (fig. 8, level 3).
- T176. Small carinated vessel of dull ware with an everted rim, grooved shoulder and rounded base; from an upper stratum of Phase III (fig. 8, level 2).
- T177. Carinated vessel of slipped grey ware possibly salt-glazed, brown inside and outer rim and black outside base, with a sharply everted rim and corrugated shoulder; from a lower stratum of Phase III (fig. 8, level 5). Analogues of this type are common at Arikamedu.<sup>2</sup>
- T178. Fragment of a vessel of dull grey ware with flanged rim, externally grooved, and a pronouncedly corrugated shoulder; from an upper stratum of Phase III (fig. 8, level 3).
- T179. Fragment of a vessel of dull grey ware with an applied cord-like band below the rim and a row of notches on the interior; from an upper stratum of Phase III (fig. 8, level 3).
- T180. Fragment of a unique vessel of dull red ware, roughly potted, with a heavy beaded rim; from an upper stratum of Phase III (fig. 8, level 2c).
- T181. Fragment of a unique gourd-shaped vessel of dull grey ware, very crudely potted; from an upper stratum of Phase III (fig. 8, level 2c).
- T182. Sherd of dull grey ware with grooves and an incised wavy-band; from an upper stratum of Phase III (fig. 8, level 2).
- T183. Sherd of highly polished black ware decorated with two rows of notches; from an upper stratum of Phase III (fig. 8, level 2).
- T184. Sherd of dull grey ware with a row of incised chevrons below grooves; from an upper stratum of Phase III (fig. 8, level 2).
- T185. Rim of a vessel of grey ware with an under-cut and internally grooved rim and multigrooved shoulder; from an upper stratum of Phase III (fig. 8, level 2c).

<sup>1</sup> *Ancient India*, no. 2 (1946), p. 66, Type 29.

<sup>2</sup> *Ibid.*, p. 63, Type 24.



- T186. Rim of a vessel of light brown ware with a sharply everted rim, grooved internally and externally, and a corrugated shoulder; from a lower stratum of Phase III (fig. 8, level 5).
- T187. Vessel of dull grey ware with a flanged rim, internally grooved, and a grooved neck; from a lower stratum of Phase III (fig. 8, level 5).
- T188. Grooved rim of slipped red ware; from a lower stratum of Phase III (fig. 8, level 6).
- T189. Vessel of slipped red ware, salt-glazed, with a sharply everted rim; from a lower stratum of Phase III (fig. 8, level 5).
- T190. Vessel of slipped red ware with beaded rim, and grooved shoulder; from a lower stratum of Phase III (fig. 8, level 5).
- T191. Vessel of red ware, salt-glazed, with cordoned rim; from an upper stratum of Phase III (fig. 8, level 3).
- T192. Vessel of grey ware with red slip and recurved rim; internally beaked and grooved; from a lower stratum of Phase III (fig. 8, level 5).
- T193. Vessel of polished brown ware with a recurved rim; from a lower stratum of Phase III (fig. 8, level 5).
- T194. Vessel of buff ware with brown slip, salt-glazed, with an undercut rim; from a lower stratum of Phase III.
- T195. Vessel of red ware, salt-glazed, with an everted and undercut rim; from a lower stratum of Phase III (fig. 8, level 5).
- T196. Vessel of buff ware with brown slip, possibly salt-glazed, with a nail-head rim; from a lower stratum of Phase III (fig. 8, level 5).
- T197. Carinated vessel of dull red ware with an internally beaded rim; from a lower stratum of Phase III (fig. 8, level 5).
- T198. Vessel of red ware, salt-glazed, with a pronounced rim, internally grooved; from a lower stratum of Phase III (fig. 8, level 5).
- T199. Vessel of slipped grey ware, possibly salt-glazed, black inside brown outside, with a thick rolled rim and a pronounced internal groove; from an upper stratum of Phase III (fig. 8, level 3).
- T200. Vessel of dull grey ware with a slightly beaded rim; from a lower stratum of Phase III (fig. 8, level 6).
- T201. Vessel of dull grey ware with a flattened and thickened rim; from a lower stratum of Phase III (fig. 8, level 6).

#### (h) *Graffiti on Brahmagiri Megalith pottery*

It has long been observed that post-firing graffiti are not uncommon on pottery from the megalithic tombs of India, though they appear to be absent from the urn-field pottery. They have been variously designated 'potters' marks', 'owners' marks' and 'tribal marks'.<sup>1</sup> Hunt regards them as symbols rather than as names, and notes that a double-circle mark 'seems to hint at a symbol indicating a young girl'. Yazdani has classified a number of these marks from various sites in the Deccan and South India,<sup>2</sup> and has inferred that 'they are like the Egyptian hieroglyphs and have been used sometimes as ideographs to express ideas, and sometimes phonetically to represent symbols or letters'. This is guesswork and gets us no further.

Twenty-four graffiti occur on the burial-pottery at Brahmagiri, but only six on 'Megalith' sherds from the town-site (four of them too fragmentary for illustration). In all cases

<sup>1</sup> E. H. Hunt, 'Hyderabad Cairns (their problems)', *Journ. of the Hyderabad Archaeological Society*, 1916, pp. 180-224; and 'Hyderabad Cairn Burials and their significance', *Journ. of the Roy. Anthropological Institute*, LIV (1924), 140-156; F. J. Richards, 'Note on some Iron Age Graves in the North Arcot District', *ibid.*, 157-165; and A. Aiyappan, 'Rock-cut Cave-tombs of Ferske, S. Malabar', *Quarterly Journ. of the Mythic Soc.*, New Series, XXIII, no. 3 (Bangalore, Jan. 1933), 299-314.

<sup>2</sup> G. Yazdani, 'Megalithic Remains of the Deccan—a New Feature of them', *Journ. of the Hyderabad Archaeological Society*, 1917, pp. 56-79; R. Bruce Foote, *Catalogue of Prehistoric Antiquities* (Madras, 1901), pl. XXXV.



they are scratched after the firing of the pot. All varieties are here illustrated (fig. 31); those which occur in groups of two or three are shown in correct interrelationship.

1. Ladder-like mark, a variation of Yazdani no. 67. On a pot of Type C13a (fig. 10). One example.
2. Triangular mark, resembling Yazdani no. 68. On a pot of Type P15a (fig. 14). A common graffito at Brahmagiri. This mark also occurs on six other pots, of Types P6, P8, P14a and P20 (figs. 13-15).
3. Rough cross, resembling Yazdani no. 52. A common graffito at Brahmagiri. It occurs sometimes alone, but is more familiar in association with other markings. This mark occurs on three pots of Types C1, C1a and C17 (figs. 9-10).
4. Rough cross, resembling Yazdani no. 51. On a pot of Type C9 (fig. 9). One example.
5. Three oblique lines, a variation of Yazdani no. 118. On a pot of Type P18b (fig. 15). This mark also occurs on another pot, of Type C27 (fig. 12).
6. Variation of a rough cross. On a pot of Type C5 (fig. 9). One example.
7. Rough scratchings on a pot of Type P18a (fig. 15). One example.
8. Group of two pot-marks, a rough cross and a ladder-like mark. On a pot of Type C29 (fig. 12). One example.
9. Group of three pot-marks, variation of Yazdani nos. 30, 33, 40 and 45. On a pot of Type C28b (fig. 12). One example.
10. Group of two pot-marks, the so-called 'bird's tail' of Foote, and a rough cross; variation of Yazdani nos. 40 and 51. On a pot of Type C5a (fig. 9). One example.
11. Group of three pot-marks, variations of the so-called 'arrow-head' of Foote. On a pot of Type C28a (fig. 12). One example.
12. Group of two pot-marks, variation of the 'arrow-head'. On a pot of Type C7b (fig. 9). One example.
13. Mark resembling Yazdani no. 45. On a pot of Type C20c (fig. 11). One example.
14. Mark resembling Yazdani no. 58. On a pot of Type P20a (fig. 15). One example.
15. Rough scratchings on a pot of Type C3 (fig. 9). One example.
16. Sherd with an 'arrow-head' mark, resembling Yazdani no. 16; from an upper stratum of the Megalith culture on the town-site (fig. 8, level 3). See also T96 (fig. 24).
17. Sherd with an incomplete mark; from a lower stratum of the Megalith culture on the town-site (fig. 8, level 6).

#### (iv) OTHER FINDS FROM BRAHMAGIRI <sup>1</sup>

##### (i) Polished stone axes <sup>2</sup>

The 1947 excavations yielded fifteen complete and twenty-nine broken polished stone axes of pointed-butt type. They were manufactured of Trap-rock, and the presence of cores and flakes of this material in the occupation-strata (mostly in the IA culture and low levels of IB) indicates a local industry. The process of manufacture falls into three stages<sup>3</sup>: (i) the stone was roughly chipped into shape (cf. pl. CXIII, 4) by means of a stone hammer; (ii) irregularities above the intended surface were broken down and the edge was shaped by 'pecking' with a pointed stone; and (iii) the implement, particularly its cutting edge, was polished by grinding on a stone, possibly supplemented by friction with

<sup>1</sup> This section of the report has been prepared mainly by Mr. B. B. Lal.

<sup>2</sup> For the distribution of polished pointed-butt stone axes in India, see below, Appendix A, p. 295.

<sup>3</sup> Cf. Bruce Foote in *Journ. As. Soc. Bengal*, LV1 (1888), 269-270.



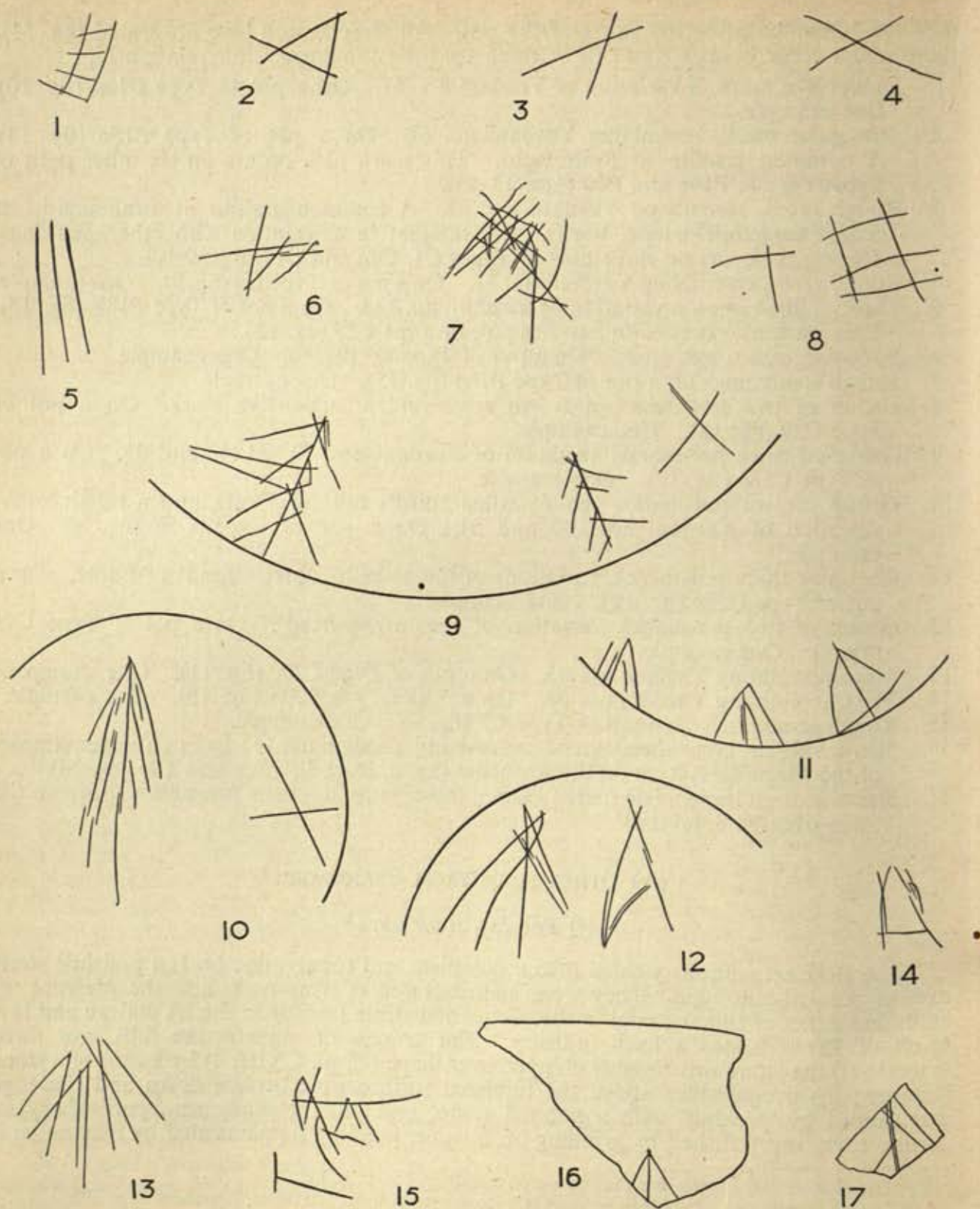


FIG. 31. Brahmagiri: graffiti on 'Megalithic' pottery.  $\frac{1}{2}$



sand. A majority of these axes was obtained from the lower levels of the IB culture, while one complete example (Type Aii, below) and three broken axes, besides several chips, came from the IA culture. A few were recovered from the overlap of the Stone Axe and Megalith cultures, but the Āndhra levels yielded only two stray examples.

These axes fall into two broad groups: A, with flat or flattened-lenticular section; and B, with lenticular or ovoid section. The former are mainly confined to the lower levels, whereas the latter occur throughout. The following is a more detailed classification (figs. 32-33):—

*Type Ai* is a small flat axe, triangular in shape. Two complete specimens, one each from the early and late levels of the IB culture, were obtained (fig. 32; pl. CXIII, 1-2).

*Type Aii* is a small flat axe with roughly parallel sides which converge abruptly to a pointed butt. The solitary example found (fig. 32; pl. CXIII, 3) came from the IA culture.

*Type Aiii* is an elongated variant (fig. 32; pl. CXIII, 4). Two specimens, one complete and one broken, were obtained, both from the middle levels of the IB culture.

*Type Aiiii* is a small flattened-lenticular axe (fig. 32; pl. CXIII, 5-6). Two complete and three fragmentary examples were obtained.

*Type Aiiia* is an elongated variant of which three complete and two fragmentary specimens were recovered (fig. 32; pl. CXIII, 7-9). The type and its variant appear in low levels of the IB culture and continue up to the overlap of this culture with the Megalithic.

*Type Bi* is a small lenticular axe. Two complete and one fragmentary examples were obtained (fig. 32; pl. CXIII, 10-11).

*Type Bii* is an elongated variant. Of this two complete and two broken examples were found (fig. 32; pl. CXIII, 12-13). The type with its variant appears late in the IB culture and continues occasionally till late Megalithic levels.

*Type Biii* is an elongated ovoid axe. One complete and eleven fragmentary specimens were obtained (fig. 33; pl. CXIII, 14-16). The type is most frequent in the middle levels of the IB culture.

*Type Biiii* is a large ovoid axe. One complete and two broken examples were recovered from the low and middle levels of the IB culture (fig. 33; pl. CXIII, 17).

*Polished stone adze*.—A solitary example of an adze (fig. 33, pl. CXIII, 18) was obtained from a late phase of the IB culture.

#### *Selected pointed-butt polished stone axes (pl. CXIII)*

1. Small flat triangular, Type Ai; from a middle stratum of the IB culture. See also fig. 32. (Br. 21-135.)
2. Small flat triangular, but broken, Type Ai; from a middle stratum of the IB culture. (Br. 17-21.)
3. Small flat with roughly parallel sides which abruptly converge to a pointed-butt, Type Aii; IA culture. See also fig. 32. (Br. 22-333.)
4. Elongated variant of no. 3, Type Aiii; from a middle stratum of the IB culture. See also fig. 32. (Br. 21-277.)
5. Small flattened-lenticular, Type Aiiii; from an early stratum of the IB culture. See also fig. 32. (Br. 21-281.)
6. Small flattened-lenticular, Type Aiiii; from a late stratum of the IB culture. (Br. 17-7.)
7. Elongated flattened-lenticular, Type Aiiia; from a middle stratum of the IB culture. (Br. 21-136.)
8. Elongated flattened-lenticular, Type Aiiia; from a middle stratum of the IB culture. See also fig. 32. (Br. 21-134.)
9. Elongated flattened-lenticular, Type Aiiia; from a middle stratum of the IB culture. (Br. 21-280.)
10. Small lenticular, Type Bi; from a late stratum of the IB culture. See also fig. 32. (Br. 21-186.)
11. Small lenticular, Type Bi; from a late stratum of the IB culture. (Br. 17-62.)
12. Elongated lenticular, Type Bii; from an early stratum of the Āndhra culture. See also fig. 32. (Br. 21-19.)
13. Elongated lenticular, Type Bii; from an early stratum of the IB culture. (Br. 16B-25.)



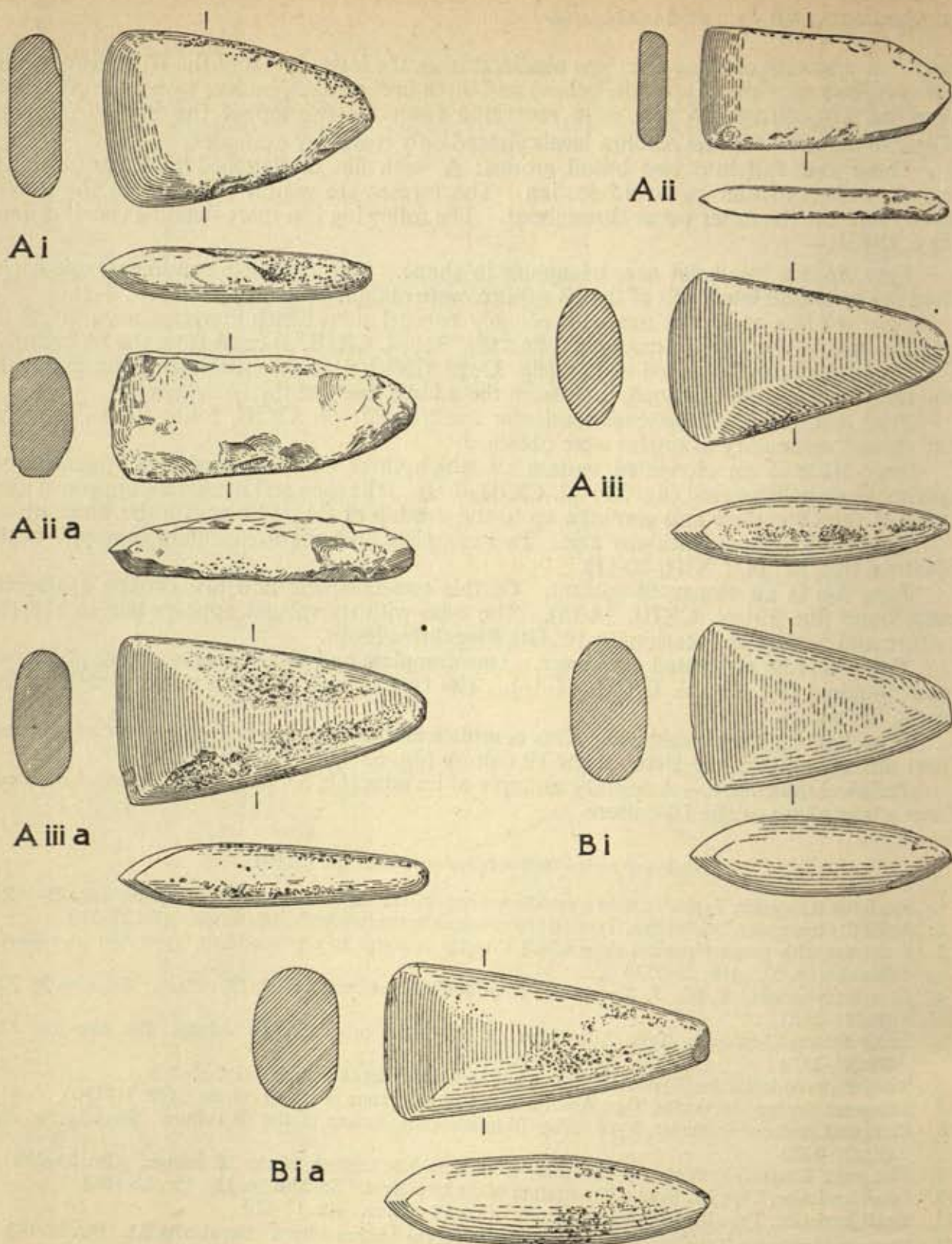


FIG. 32. *Types of stone axe ; Brahmagiri.*  $\frac{1}{2}$



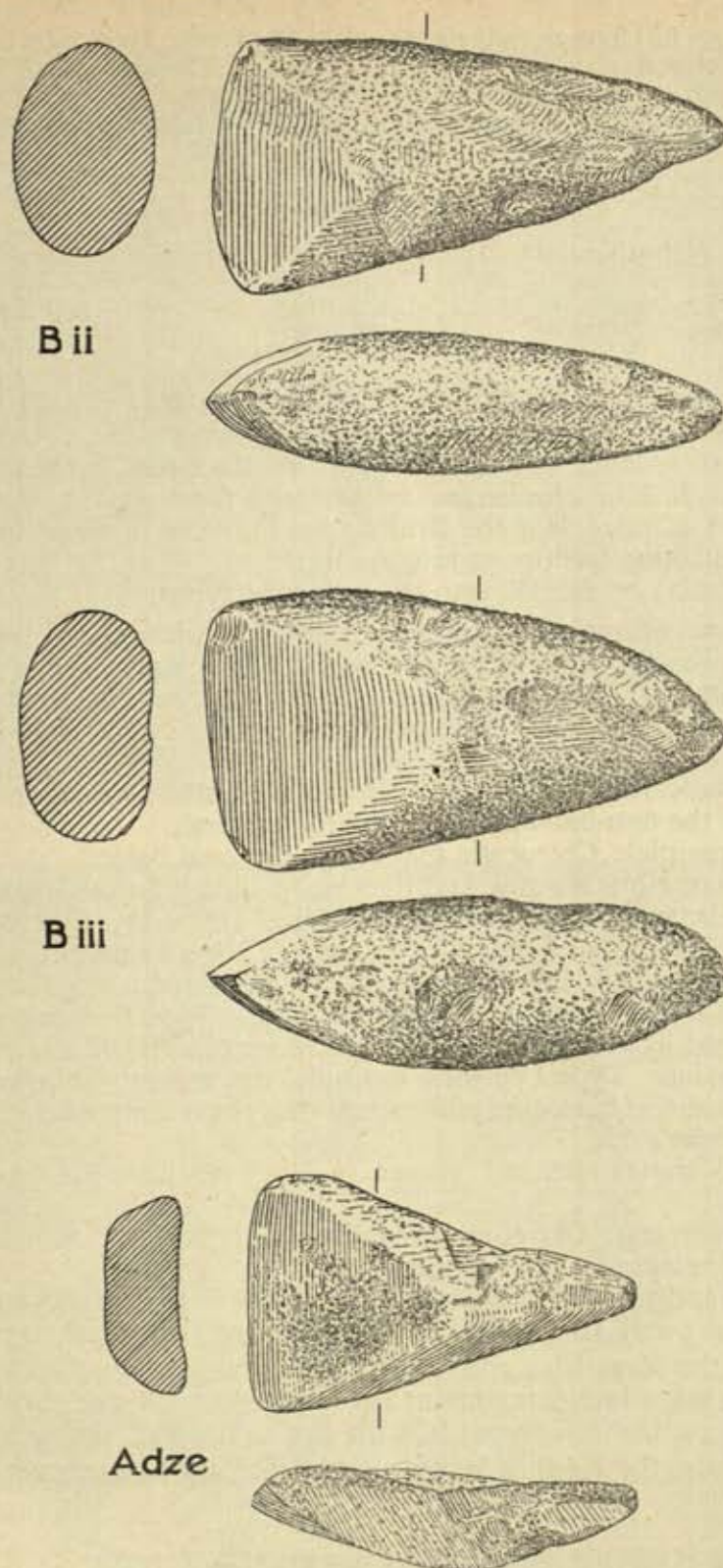


FIG. 33. Types of stone axe and adze ; Brahmagiri.  $\frac{1}{2}$



14. Elongated ovoid, Type Bii; from an early stratum of the IB culture. See also fig. 33. (Br. 16B-25.)
15. Elongated ovoid, broken, Type Bii; from a late stratum of the IB culture. (Br. 21-227.)
16. Elongated ovoid, broken, Type Bii; from a late stratum of the IB culture. (Br. 21-267.)
17. Large-sized ovoid, Type Biii; from an early stratum of the IB culture. See also fig. 33. (Br. 16B-25.)

*Polished stone adze (pl. CXIII)*

18. From a late stratum of the IB culture. This is the only adze from the site. See also fig. 33. (Br. 19-4.)

(j) *Microliths*<sup>1</sup>

The present excavations yielded one hundred and two microliths besides twenty-three amorphous flakes. The material used includes jasper, agate, carnelian, flint, common opal and rock-crystal<sup>2</sup>. With due allowance for the fact that, even in an evolved microlithic industry, retouched or specialized implements form only a minute proportion of the whole, it must be affirmed that the Brahmagiri industry is crude in the extreme, and rarely exhibits any effective attempt at retouching.

The implements may be divided into the following types:—

*Type I* (sixty-four examples): Double-edged blade without retouch. *Type Ia* (three examples) has one edge slightly serrated, apparently deliberately. *Type Ib* (seven examples) differs from the main type in having one end slightly curved; in some cases at least, this is doubtless an accidental feature, although it provides a useful hold for the thumb and forefinger.

*Type II* (six examples): Blade with battered back blunted by steep retouching. *Type IIa* (three examples) has the non-battered edge slightly serrated.

*Type III* (one example): Crescentic blade with battered back.

*Type IV* (one example): Narrow leaf-like blade with point at both ends and battered back. It is a cross between a crescent and a point. *Type IVa* (one example) is a point with a curved back but without retouch; variant *IVb* (one example) differs from *IVa* in having a battered back. *Type IVc* (one example) is a pointed triangular blade; variant *IVd* (one example) differs from it in having a serrated edge. *Type IVe* (one example) is a blade with a point retouched like the sharpened end of a pencil. *Type IVf* (one example) has a double-shouldered point. *Type IVg* (one example) has a small oblique point. *Type IVh* (two examples) has a lateral beak-like point somewhat resembling a beaked graver (*Type V*); its edges are slightly serrated.

*Type V* (one example): Beaked graver (*burin*). Variant *Va* (one example) has a squared base.

*Type VI* (two examples): Chisel-ended blade.

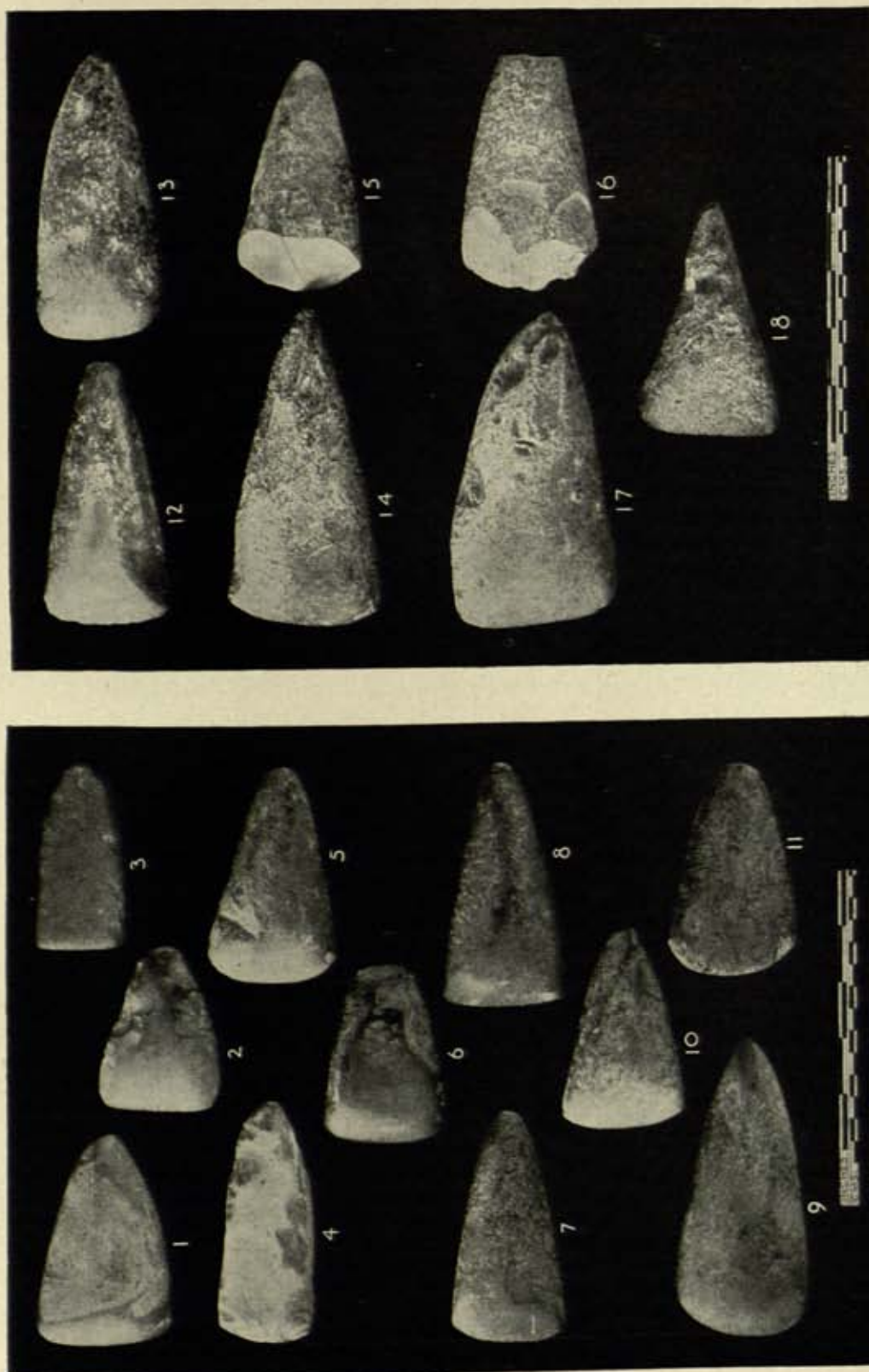
*Type VII* (four examples): Side-scrapers.

Of the hundred-and-two finished microliths, no fewer than eighty-nine were recovered from phases IA (nine) and IB (eighty) of the Brahmagiri Stone Axe culture. Only nine examples came from the Megalithic and four from the Āndhra layers. The use of microlithic implements was thus essentially a feature of the Stone Axe culture; their limited continuity into the Megalithic culture is consistent with the overlap of the two cultures (p. 200). The old specimens from the Āndhra layers may be discounted as strays.

<sup>1</sup> For the distribution of microlithic industries in India, see below, Appendix B, p. 299.

<sup>2</sup> Selected specimens were kindly examined by Dr. D. N. Wadia.





*Brahmagiri: polished stone axes (1-17) and adze (18)*





*Brahmagiri: microliths from the town-site. Enlarged  $\frac{2}{3}$*



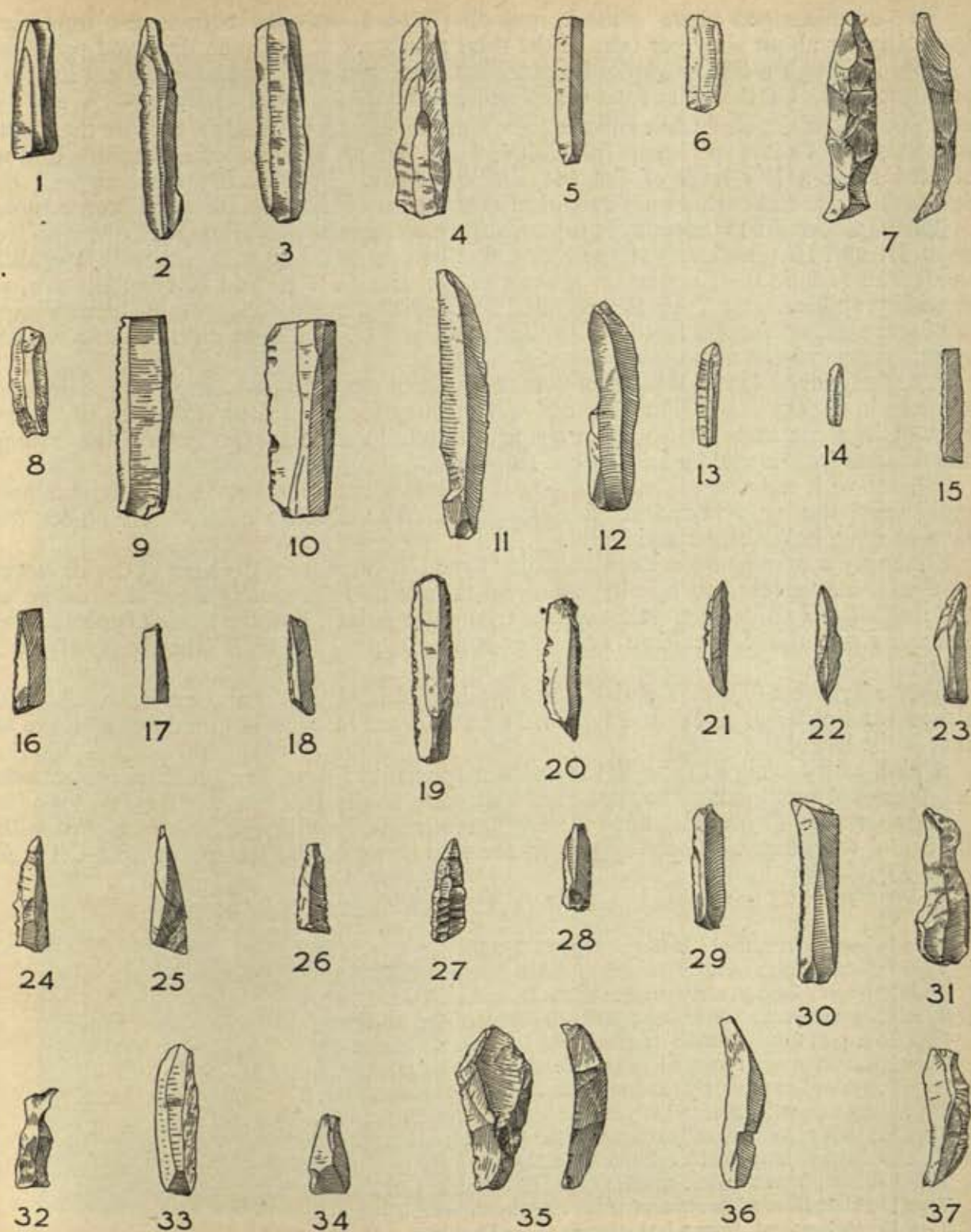


FIG. 34. *Microliths and flakes ; Brahmagiri.* †



The double-edged blade without retouch (Type I) was the commonest implement, accounting for about sixty per cent of the total number. It was manufactured principally in jasper although a few examples in carnelian, common opal and rock-crystal have also been obtained. Of the sixty-four complete specimens, six are from phase IA and fifty from phase IB of the Stone Axe culture, five from the Megalithic, and three from the Andhra culture. One of these specimens (pl. CXIV, 7 and fig. 34, 7) is nicked for hafting and was obtained from a low level of the Megalithic culture. In assessing these figures, it is important to remember that only a relatively small area of the IA culture has been explored.

Of simple serrated blades (Type Ia), only three specimens were obtained: one each from phases IA and IB (low level) of the Stone Axe culture and one from an early Megalithic layer. The technique of serration, though known since the earliest level of the site, was not widely applied. Of Type IIa (serrated blade with battered back) only three examples were recovered, all from a low level in the IB culture. There is no sign of gloss, whether on the serrated or the un-serrated edges.

The bent blade (Type Ib) is represented by seven examples, two in flint, two in jasper and three in rock-crystal. The bent end was presumably the active part of the implement, although in some cases at least the shape was purely accidental. The earliest example was obtained from a middle level of the IB culture.

Blades with a battered back (Types II and IIa) are represented by nine examples, mostly from the early layers of the IB culture. The absence of battered blades from phase IA may, however, be accidental.

The only example of a crescentic blade (Type III) came from the base of the IB culture.

Points are represented by nine examples (Types IV-IVh) mostly from the middle and late levels of the IB culture. Of the two triangular points, however, one (Type IVd) was obtained from the IA culture and the other (Type IVc) from the base of the IB culture.

Beaked graters (Types V and Va) are specialized implements and are rare. Both the finished examples (pl. CXV and fig. 34, 31 and 32) are in carnelian, and occur in the late levels of the IB culture.

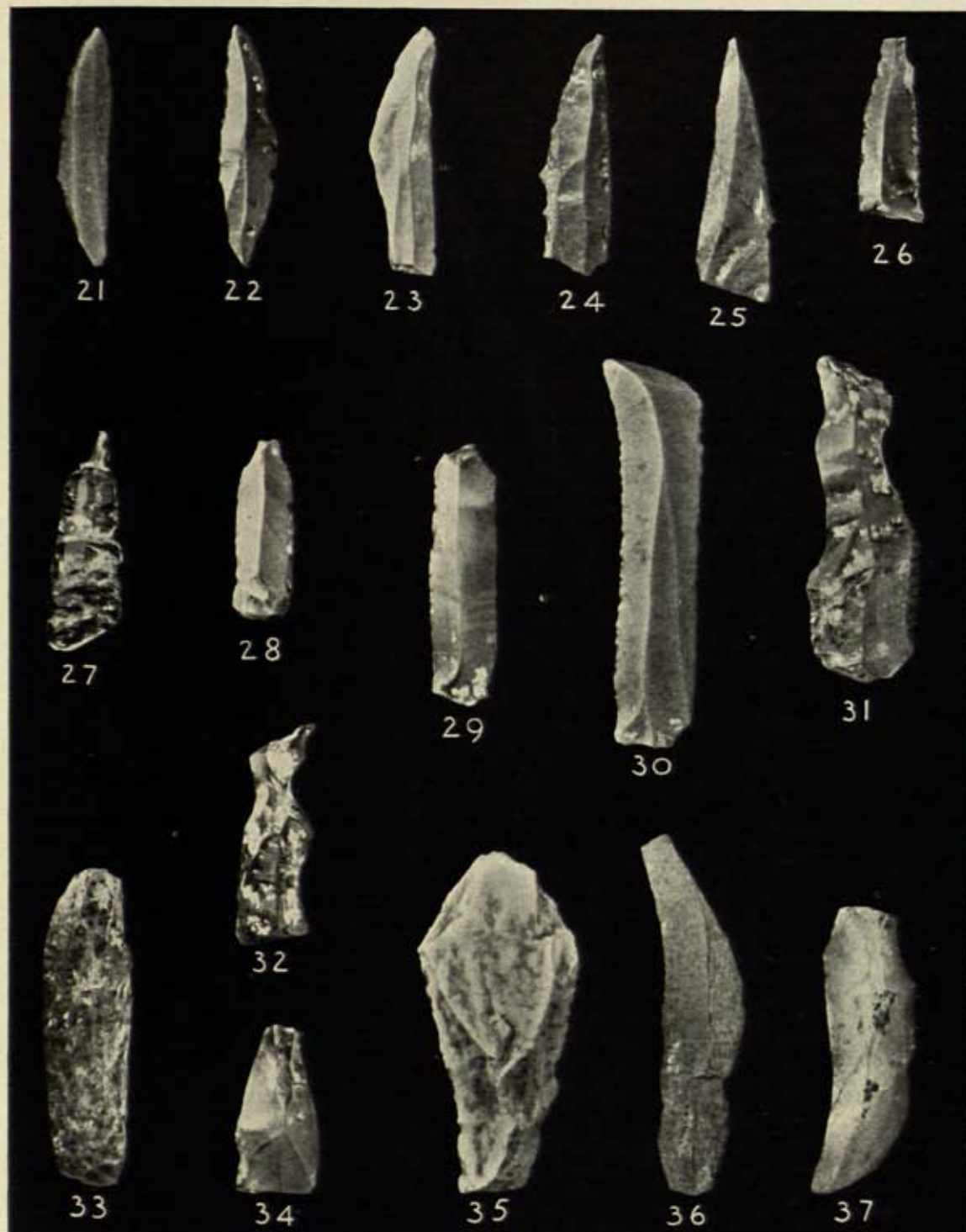
Chisel-ended blades (Type VI) are also a specialized type, for which either carnelian or rock-crystal was used. The type occurs as early as the IA culture.

Side-scrapers (Type VII) have a slightly curved body which facilitates a grip with a thumb and fore-finger. These appear in the late levels of the IB culture (pl. CXV and fig. 34, 37).

*Typical microliths (pls. CXIV-CXV and fig. 34)*

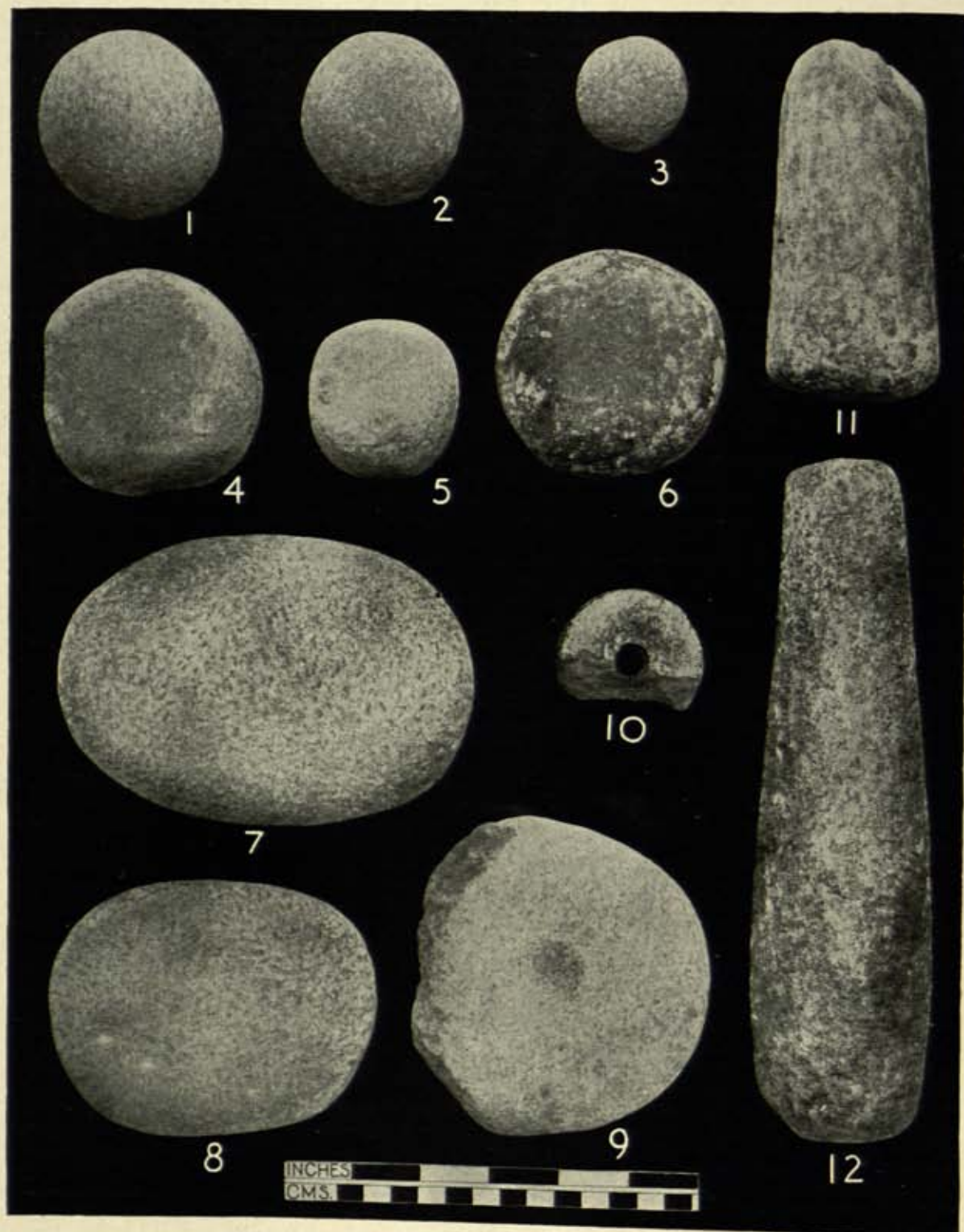
1. Type I; jasper; from the IA culture. (Br. 22-266.)
2. Type I; jasper; from an early stratum of the IB culture. (Br. 17-93.)
3. Type I; jasper; from an early stratum of the IB culture. (Br. 17-88.)
4. Type I; agate; from a late stratum of the IB culture. (Br. 21-189.)
5. Type I; jasper; from a middle stratum of the IB culture. (Br. 22-287.)
6. Type I; common opal; from a late stratum of the IB culture. (Br. 21-163.)
7. Type I; agate; from an early stratum of the Megalithic culture. (Br. 21-270.)
8. Type I; rock-crystal; from an early stratum of the Megalithic culture. (Br. 22-210.)
9. Type Ia; jasper; from an early stratum of the Megalithic culture. (Br. 21-109.)
10. Type Ia; jasper; from the IA culture. (Br. 22-349.)
11. Type Ib; flint; from a middle stratum of the IB culture. (Br. 21-228.)
12. Type Ib; flint; from a late stratum of the IB culture. (Br. 21-225.)
13. Type Ib; rock-crystal; from a late stratum of the IB culture. (Br. 21-224.)
14. Type Ib; rock-crystal; from a late stratum of the IB culture. (Br. 21-118.)
15. Type II; jasper; from an early stratum of the IB culture. (Br. 22-638.)





*Brahmagiri: microliths from the town-site. Enlarged  $\frac{2}{3}$*





*Brahmagiri: stone objects*



16. Type II; jasper; from an early stratum of the IB culture. (Br. 22-663.)
17. Type II; jasper; from a late stratum of the IB culture. (Br. 21-91.)
18. Type II; jasper; from an early stratum of the IB culture. (Br. 22-620.)
19. Type IIa; jasper; from an early stratum of the IB culture. (Br. 17-104B.)
20. Type IIa; jasper; from an early stratum of the IB culture. (Br. 17-104.)
21. Type III; flint; from an early stratum of the IB culture. (Br. 22-581.)
22. Type IV; blood jasper; from a late stratum of the IB culture. (Br. 21-157.)
23. Type IVa; flint; from a late stratum of the IB culture. (Br. 21-170.)
24. Type IVb; jasper; from a late stratum of the IB culture. (Br. 21-107.)
25. Type IVc; jasper; from an early stratum of the IB culture. (Br. 22-582.)
26. Type IVd; agate; from the IA culture. (Br. 22-661.)
27. Type IVe; rock-crystal; from an early stratum of the Megalithic culture. (Br. 22-214.)
28. Type IVf; jasper; from a late stratum of the IB culture. (Br. 21-123.)
29. Type IVg; agate; from a late stratum of the IB culture. (Br. 21-153.)
30. Type IVh; jasper; from a late stratum of the IB culture. (Br. 21-167.)
31. Type V; carnelian; from a late stratum of the IB culture. (Br. 21-74.)
32. Type Va; carnelian; from a late stratum of the IB culture. (Br. 21-199.)
33. Type VI; rock-crystal; from an early stratum of the Megalithic culture. (Br. 22-172.)
34. Type VI; carnelian; from the IA culture. (Br. 22-651.)
35. Type VII; agate; from an early stratum of the Andhra culture. (Br. 21-29.)
36. Type VII; common opal; from a late stratum of the IB culture. (Br. 21-254.)
37. Type VII; common opal; from a late stratum of the IB culture. (Br. 21-185.)

(k) *Other stone objects* (pls. CXVI and CXVII)

No stone objects were found in the megalithic cists, but a pit-circle, Megalith II, produced a granite pestle (pl. CXVI, 12).

On the town-site, the sub-phase IA of the Stone Axe culture yielded a saddle-quern, three rubbers and a stone ball, while the sub-phase IB produced a saddle-quern, two rubbers, eight flat oval discs and two spherical and thirteen spheroid balls. From the Megalith levels were obtained two rubbers and one spherical and eight spheroid balls. In the Andhra strata were found two rubbers, two flat oval discs, four spherical and four spheroid balls, a pestle, and a small cylindrical object of uncertain use, with a cylindrical perforation at the centre (no. 10 below).

The use to which the spherical and spheroid balls were put cannot be determined with certainty. The spheroids, flattened at the base and top, were presumably used for rubbing, and the spheres perhaps represent unused examples. Their varying bulk rules out their use as weights. The use of the flat oval discs is still less certain; the presence of a small cup-like depression near the centre of one side of no. 9 may represent an incompleting boring.

Pl. CXVI

1. Ball; granite. From an early stratum of the IB culture. (Br. 17-41.)
2. Ball; granite. From a Megalith level. (Br. 22-472.)
3. Ball; Trap-rock. From a middle stratum of the Andhra culture. (Br. 22-51.)
4. Spheroid ball, flattened at the base and top; Trap-rock. From a middle stratum of the IB culture (Br. 17-71.)
5. As no. 4; granite. From a Megalith level. (Br. 21-211.)
6. Rubber; Trap-rock. From a middle stratum of the Andhra culture. (Br. 22-128.)
7. Flat oval disc; granite. From an early stratum of the IB culture. (Br. 22-658.)
8. Flat oval disc; granite. From a middle stratum of the IB culture. (Br. 17-21.)



9. Flat oval disc, with a small cup-like depression near the centre; broken; granite. From a late Āndhra level. (Br. 23-29.)
10. Cylindrical object, with cylindrical central perforation,  $1\frac{1}{2}$  inches deep; use unknown (too massive for a spindle-whorl); Trap-rock. From an Āndhra pit. (Br. 23-16.)
11. Pestle; granite. From an early Āndhra level. (Br. 22-365.)
12. Pestle; granite. From a pit-circle. (Br. Meg. II-13.)

PL. CXVII

13. Saddle-quern, broken; granite. From the IA culture. (Br. 17-48.)
14. Another fragment of a saddle-quern; granite. From a middle stratum of the IB culture. (Br. 22-540.)
15. Rubber, with a plano-convex section; granite. From the IA culture. (Br. 17-30.)

(I) Iron objects

The megalithic cists and pit-circles produced a large number of iron objects, all in a very bad state of preservation. In most cases it was necessary to prepare the drawings *in situ*, and for this purpose sheets of glass (generally old photographic plates) were used, the procedure being to clean the glass with methylated spirit and then to trace the object on to it in ink.

The pit-circles were notably richer than the cists in iron objects, and might contain as many as nineteen (Megalith VII), in contrast to a maximum of eight in the cists (Megalith VIII). The objects from the pit-circles comprised seven tanged knives or daggers, four wedge-like blades, four chisels, two sickles, two lances, a sword, a barbed arrow-head, a thin dish-like object, a fragmentary ring with two nails affixed to it, a chopper-like object with a long handle, and three spears,  $5\frac{1}{2}$ - $6\frac{1}{2}$  feet long, with flat elongated blade and round (iron) shaft constricted towards the butt and having a terminal knob (fig. 35), besides twenty fragmentary and highly decayed objects which could not be identified. The objects from the cists included six tanged knives or daggers, a fragmentary chisel, an axe with a detached ring round the butt-end, and two featureless bars  $1\frac{1}{2}$ - $2\frac{1}{2}$  feet long (not illustrated), in addition to half-a-dozen unidentified fragments.

Two fragmentary knives or daggers were found associated with Megalith pottery on a floor preceding the construction of Megalith VI (cist).

On the town-site, the Stone Axe levels produced no iron objects. Those from the Megalith levels include four nails and an arrow-head. The Āndhra levels yielded three tanged knives, two sickles, a boring-tool, two hooks, eight nails, and an indeterminate object with cogged edge.

Below are described typical iron objects from: (i) the floor associated with Megalith pottery but preceding the construction of Megalith VI (cist); (ii) the cists; (iii) the pit-circles; and (iv) the 'Megalith' and 'Āndhra' levels of the town-site.

(i) From the 'Megalith' floor preceding the construction of Megalith VI (cist)

Fig. 36

1. Tanged knife or dagger, broken. (Br. Meg. VI, RA.) Tanged knives and daggers have been obtained from the burial-urns at Ādichanallur in Tinnevely district, Madras Presidency<sup>1</sup>; from the cairns north

<sup>1</sup> Alexander Rea, *Catalogue of Prehistoric Antiquities from Ādichanallur and Perumbair* (Madras Government Museum, 1915), p. 17, nos. 120 and 153, pl. IV, fig. 2 and 7.



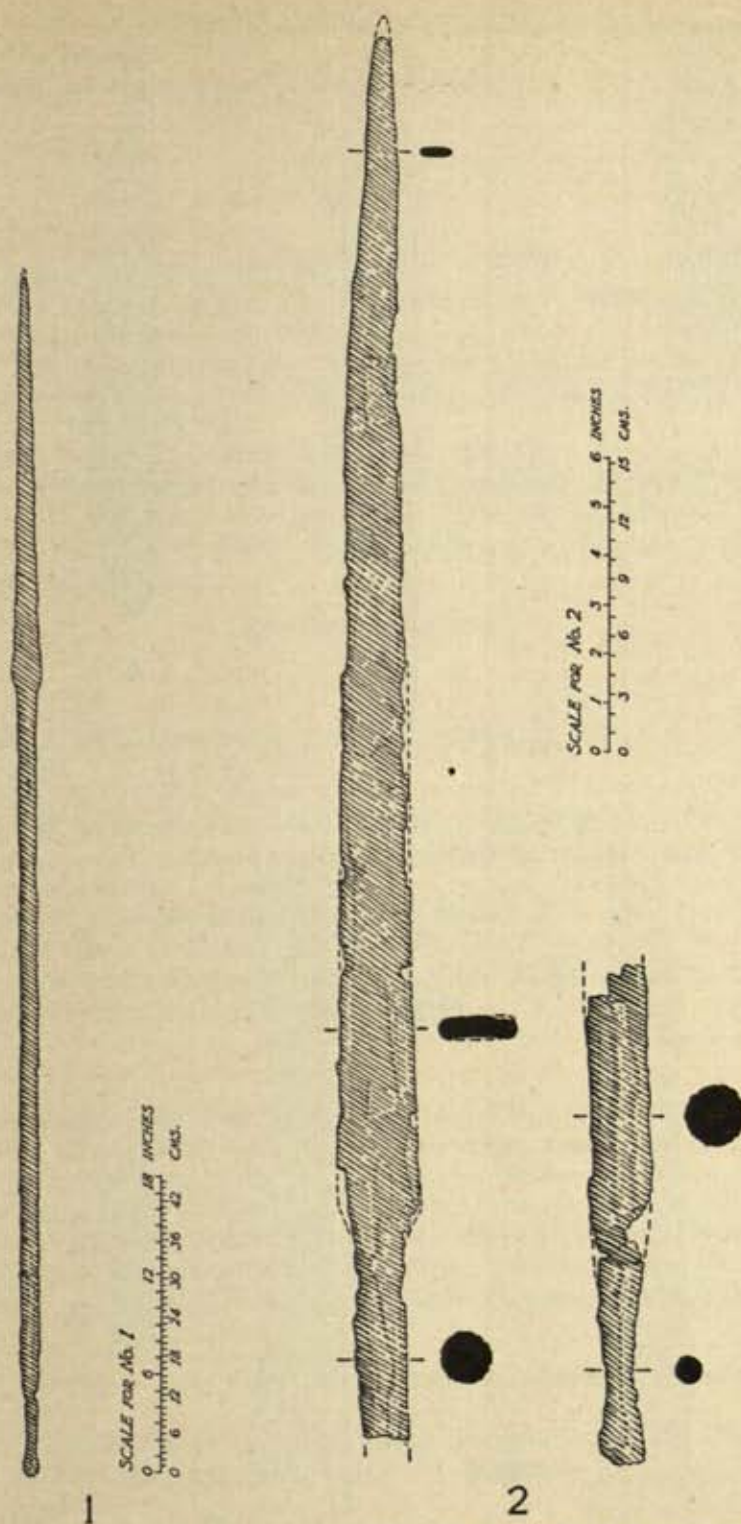


FIG. 35. Iron spear from Brahmagiri pit-circle, Megalith VII: 1, the complete implement ;  
2, larger detail of blade and butt



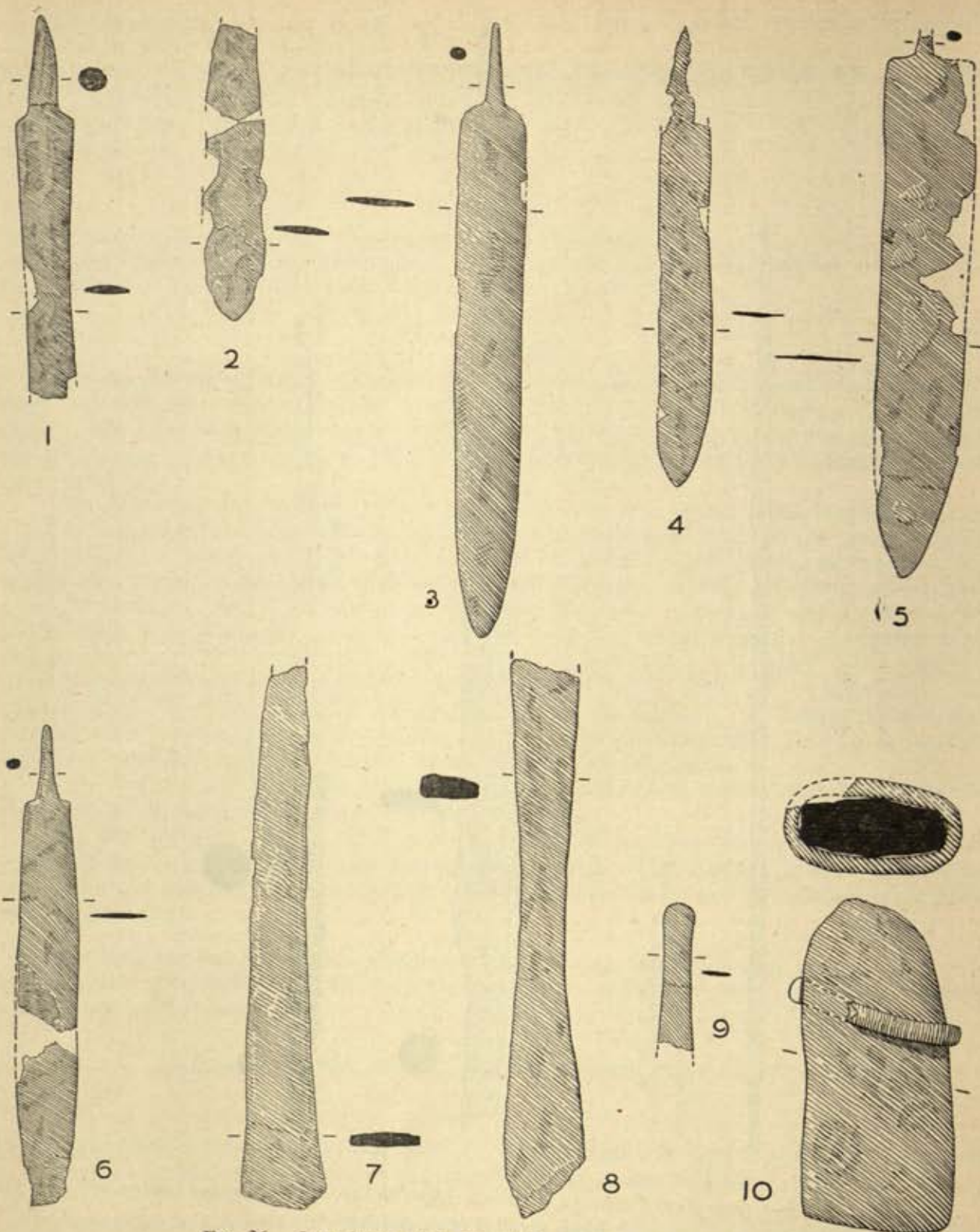


FIG. 36. Iron objects of the Megalithic culture, Brahmagiri.  $\frac{1}{2}$



of Tarnatmand in the Nilgiri Hills<sup>1</sup>; and from the urns at Kil Mondambadi, near Shevaroy Hills, Salem district, Madras Presidency.<sup>2</sup>

2. Fragmentary blade of a knife or dagger. (Br. Meg. VI, RB.)

(ii) *From the cists*

Fig. 36

3. Tanged knife or dagger. (Br. Meg. VIII, R4.)
4. Fragmentary blade of a knife or dagger. (Br. Meg. VIII, R3.)
5. Tanged knife or dagger. (Br. Meg. VI, R1.)
6. Two fragments of a tanged knife or dagger. (Br. Meg. VI, R2 and R3.)
7. Bar of indeterminate shape and use, with oblong section. (Br. Meg. VI, R4.)
8. Similar to no. 7. (Br. Meg. VIII, R2.)
9. Fragment of a chisel; see nos. 25-26 below. (Br. Meg. VIII, R5.)
10. Blade (axe?) with a detached ring round the butt-end, presumably for affixing to a split wooden handle. (Br. Meg. I, R1.) An example of this type with a similar ring was obtained from a burial-urn at Kil Mondambadi, near the Shevaroy Hills.<sup>3</sup> Other examples, also with rings, come from the burial-urns at Adichanallur, Tinnevely district.<sup>4</sup>

(iii) *From the pit-circles*

Fig. 37

11. Tanged knife or dagger with unusually thin section. (Br. Meg. II, R9.)
12. Tanged knife or dagger. (Br. Meg. IX, R1.)
13. Tanged knife or dagger. (Br. Meg. VII, R1.)
14. Tanged knife or dagger with lenticular section. (Br. Meg. VII, R13.)
15. Tanged knife or dagger with V-shaped end and flanged shoulders. (Br. Meg. VII, R9.) The V-shaped end is deliberate, not a break.
16. Tanged knife or dagger; unusually small. (Br. Meg. VII, R4.)
17. Fragmentary blade of a knife or dagger. (Br. Meg. VII, R2.)
- 18-20. Bars of indeterminate use, oblong in section. (Br. Meg. VII, R19; Br. Meg. IX, R6; and Br. Meg. II, R14 respectively.)

Fig. 38

- 21-24. Blades, probably wedges. (Br. Meg. II, R13; Br. Meg. VII, R12; Br. Meg. IX, R5; and Br. Meg. II, R15 respectively.) These blades resemble the iron wedges used today for levering up granite slabs after loosening them by means of fire (above, p. 187). Similar blades have been obtained from the cists at Jala, 17 miles north-north-east of Bangalore<sup>5</sup>; and from the stone-circles (which contained pyriform burial-urns and pottery-cists) at Perumbair, Chingleput district, Madras.<sup>6</sup>
- 25-26. Chisels, respectively flat and plano-convex in section. (Br. Meg. II, R11A and R11B respectively.) Similar chisels have been obtained from Adichanallur.<sup>7</sup> They may have been used for cutting leather.

<sup>1</sup> R. Bruce Foote, *Catalogue of the Prehistoric Antiquities* (Government Museum, Madras, 1901), p. 76, pl. XVII, nos. 870 and 874.

<sup>2</sup> R. Bruce Foote, *Indian Prehistoric and Protohistoric Antiquities: Notes on their Ages and Distribution* (Government Museum, Madras, 1916), pp. 61-62, pl. 51.

<sup>3</sup> Ibid., pp. 61-62, pl. 50.

<sup>4</sup> Rea, op. cit., p. 18, nos. 223 and 235, pl. IV, figs. 17 and 20.

<sup>5</sup> Bruce Foote (1901), p. 118, pl. XXXI, no. 1274.

<sup>6</sup> Rea, op. cit., p. 45, no. 127, pl. XI, fig. 13.

<sup>7</sup> Ibid., p. 14, no. 13, pl. III, fig. 6.



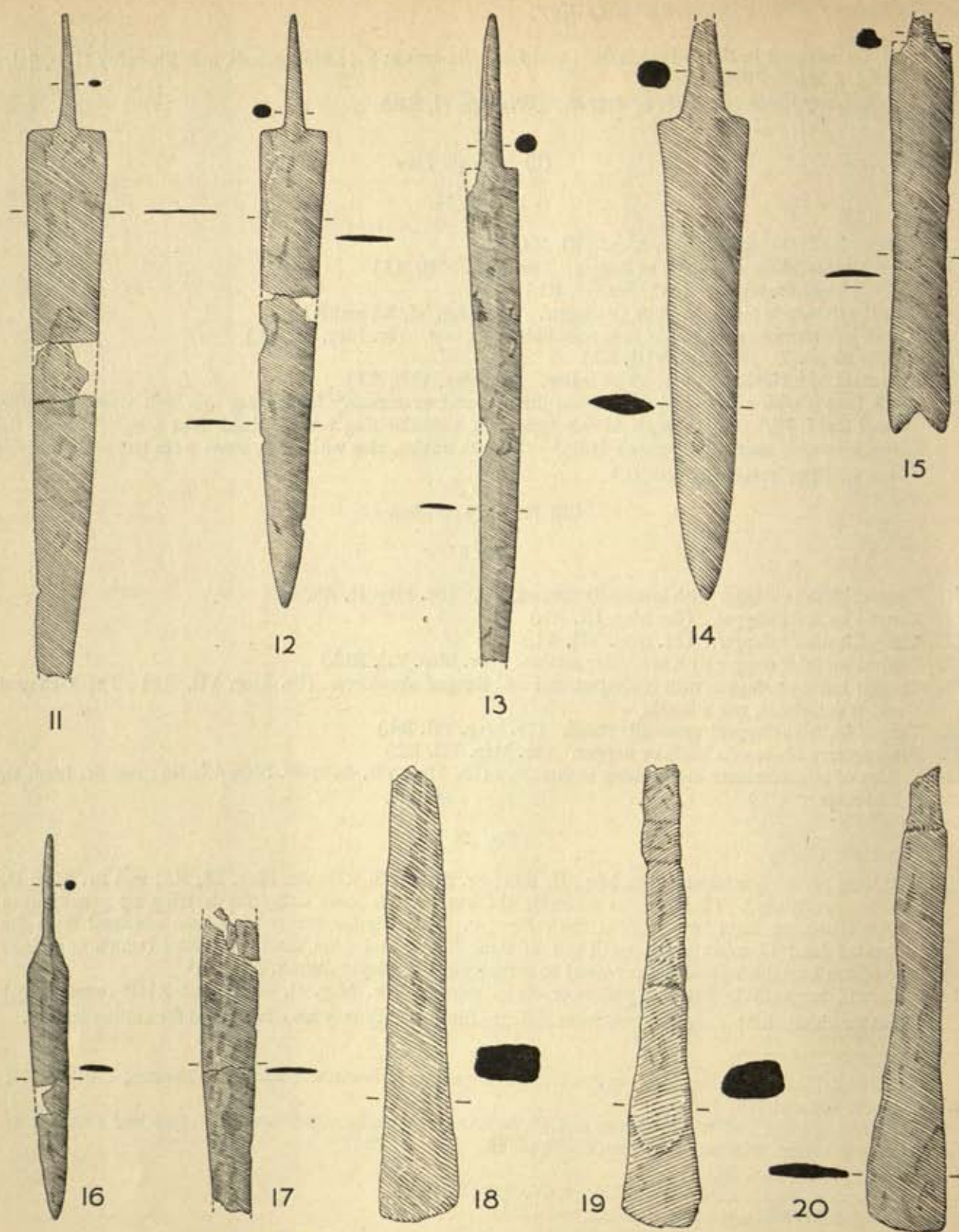


FIG. 37. *Iron objects of the Megalithic culture, Brahmagiri.*  $\frac{1}{2}$



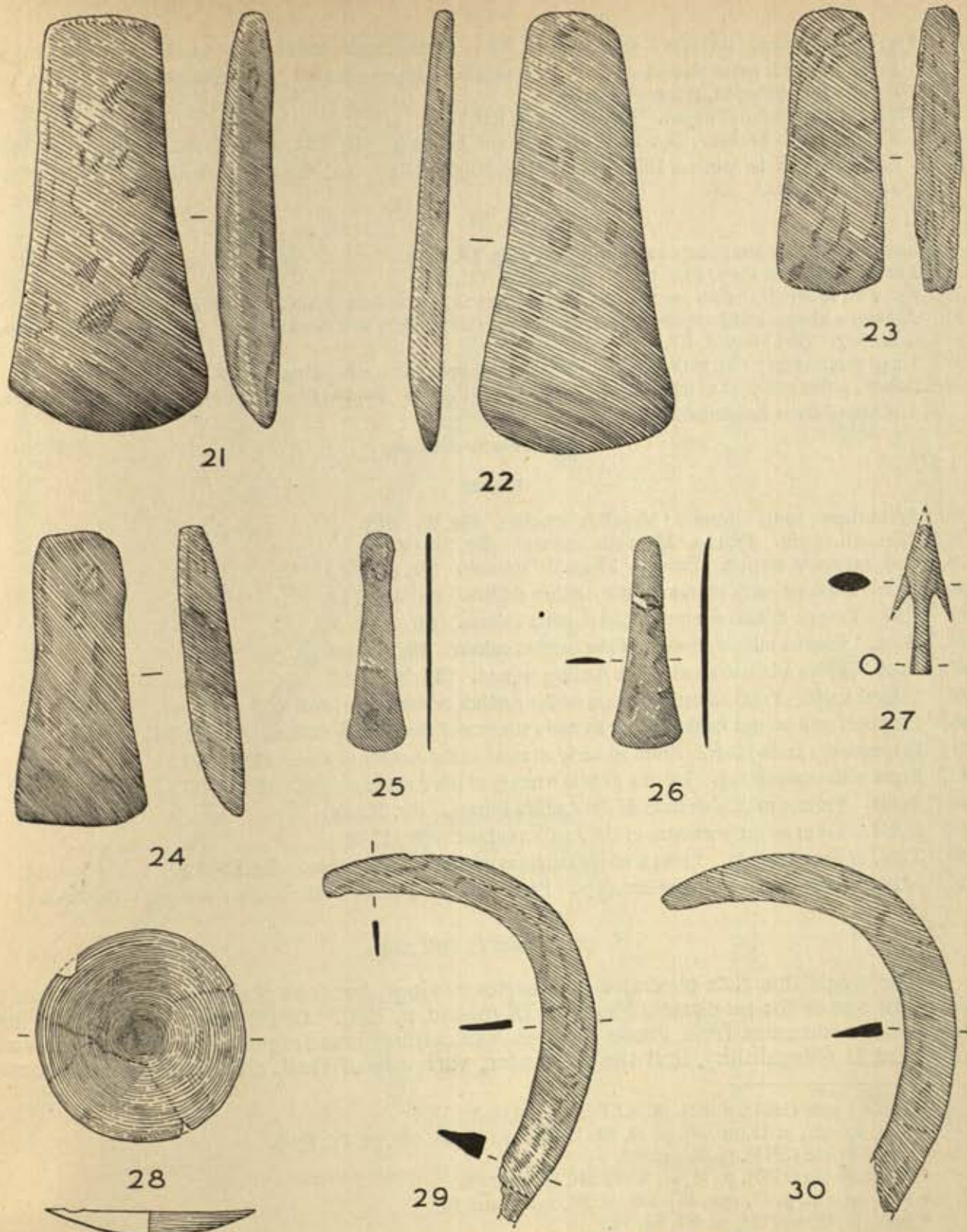


FIG. 38. *Iron objects of the Megalithic culture, Brahmagiri.*  $\frac{1}{2}$



27. Barbed arrow-head, socketed. (Br. Meg. II, R3.) Similar arrow-heads have been found in the cists at Savandrug, 22 miles west-south-west of Bangalore, Mysore State<sup>1</sup>; at Ādichanallur<sup>2</sup>; and in the burial-urns at Patpād, Kurnool district.<sup>3</sup>
28. Thin, shallow dish-like object. (Br. Meg. VII, R18.)
- 29-30. Sickles, tangs broken. (Br. Meg. II, R16, and Br. Meg. VII, R14, respectively.) Sickles have been obtained from the cairns at Hillava Kunde Hill, Nilgiri Hills<sup>4</sup>; and from the burial-urns at Ādichanallur<sup>5</sup> and Perumbair.<sup>6</sup>

Fig. 39

31. Lance with blade lenticular in section. (Br. Meg. IX, R4.)
32. Lance, rougher in shape than no. 31. (Br. Meg. VII, R8.)
33. Bar with squarish section narrowing towards one end; use indeterminate. (Br. Meg. VII, R16.)
34. A unique chopper-like object, with long handle, sharp blade, and hooked end. No analogies are forthcoming. (Br. Meg. II, R8.)
35. Large fragmentary ring with two nails affixed; use uncertain. (Br. Meg. VII, R5.)
36. Sword; point and part of tang missing. (Br. Meg. II, R1.) Swords of various sizes and shapes have been obtained from Ādichanallur.<sup>7</sup>

(iv) *From the town-site*

Fig. 40

37. Arrow-head, bent. From a 'Megalith' stratum. (Br. 22-549.)
38. Thin nail or pin. From a 'Megalith' stratum. (Br. 22-199.)
39. Nail, square in section. From a 'Megalith' stratum. (Br. 22-181.)
40. Nail. From an early stratum of the Āndhra culture. (Br. 22-374.)
41. Nail. From a middle stratum of the Āndhra culture. (Br. 22-76.)
42. Hook. From a middle stratum of the Āndhra culture. (Br. 21-144.)
43. Hook. From a late stratum of the Āndhra culture. (Br. 21-3.)
44. Tanged knife. From an early stratum of the Āndhra culture. (Br. 16A-65.)
45. Fragment of a tanged knife. From an early stratum of the Āndhra culture. (Br. 22-343.)
46. Fragmentary knife-blade. From an early stratum of the Āndhra culture. (Br. 16B-1.)
47. Borer with conical tang. From a middle stratum of the Āndhra culture. (Br. 22-37.)
48. Sickle. From a middle stratum of the Āndhra culture. (Br. 22A-3.)
49. Sickle. From an early stratum of the Āndhra culture. (Br. 22-54.)
50. Tube, of uncertain use. From a middle stratum of the Āndhra culture. (Br. 22-28.)
51. Indeterminate object with saw-like edge. From a middle stratum of the Āndhra culture. (Br. 22-338.)

(m) *Bangles and rings*

The megalithic cists produced no bangles or rings, but four plain copper bangles were found in one of the pit-circles, Megalith IX (above, p. 199). Of fifty-four bangles from the town-site, none came from Phase I (Stone Axe culture), one fragmentary shell bangle was of Phase II (Megalithic), and the remainder, variously of shell, clay, bone, glass, bronze

<sup>1</sup> Bruce Foote (1901), p. 124, pl. XXIX, nos. 1333-38.

<sup>2</sup> Rea, op. cit., p. 15, no. 60, pl. II, fig. 13; and p. 17, no. 152, pl. IV, fig. 6.

<sup>3</sup> Bruce Foote (1916), p. 222, pl. 49.

<sup>4</sup> Bruce Foote (1901), p. 78, pl. XVI, nos. 880 and 881.

<sup>5</sup> Rea, op. cit., p. 17, nos. 167-168, pl. IV, figs. 8 and 10.

<sup>6</sup> Ibid., p. 45, no. 128, pl. XI, fig. 14.

<sup>7</sup> Rea, op. cit., pl. III, fig. 16; pl. IV, fig. 21; and pl. V, figs. 1-4 and 15.



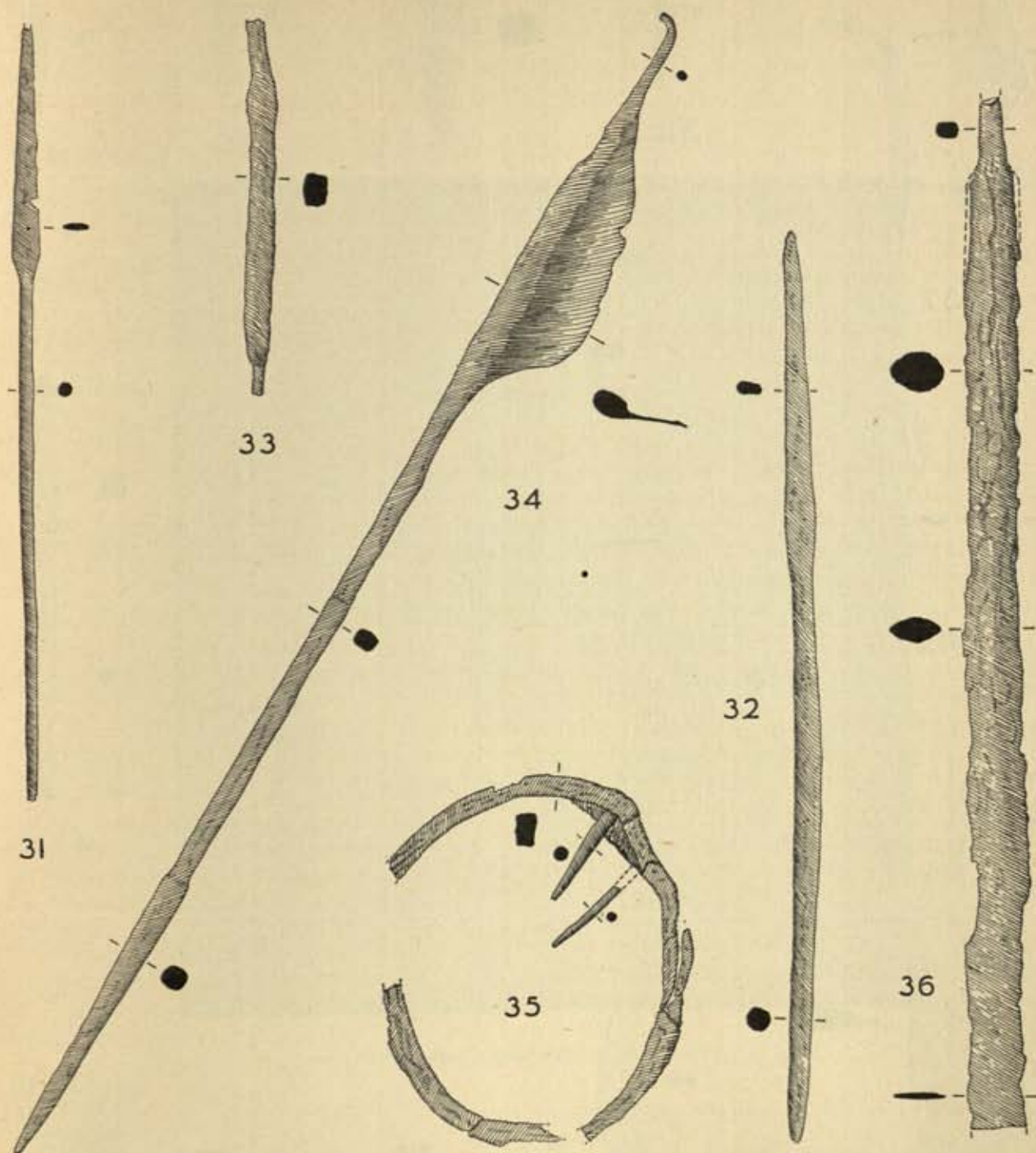


FIG. 39. Iron objects of the Megalithic culture, Brahmagiri.  $\frac{1}{4}$



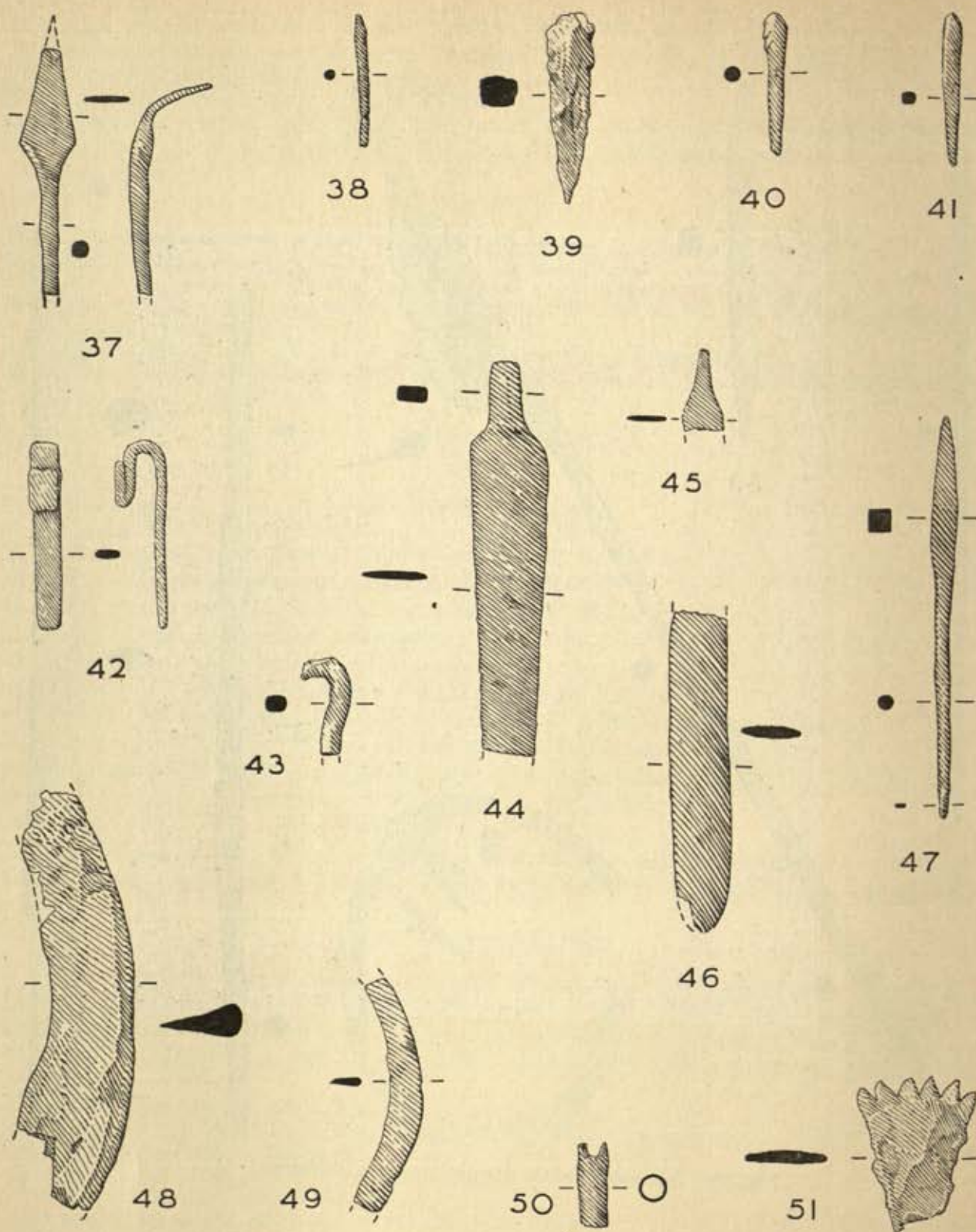
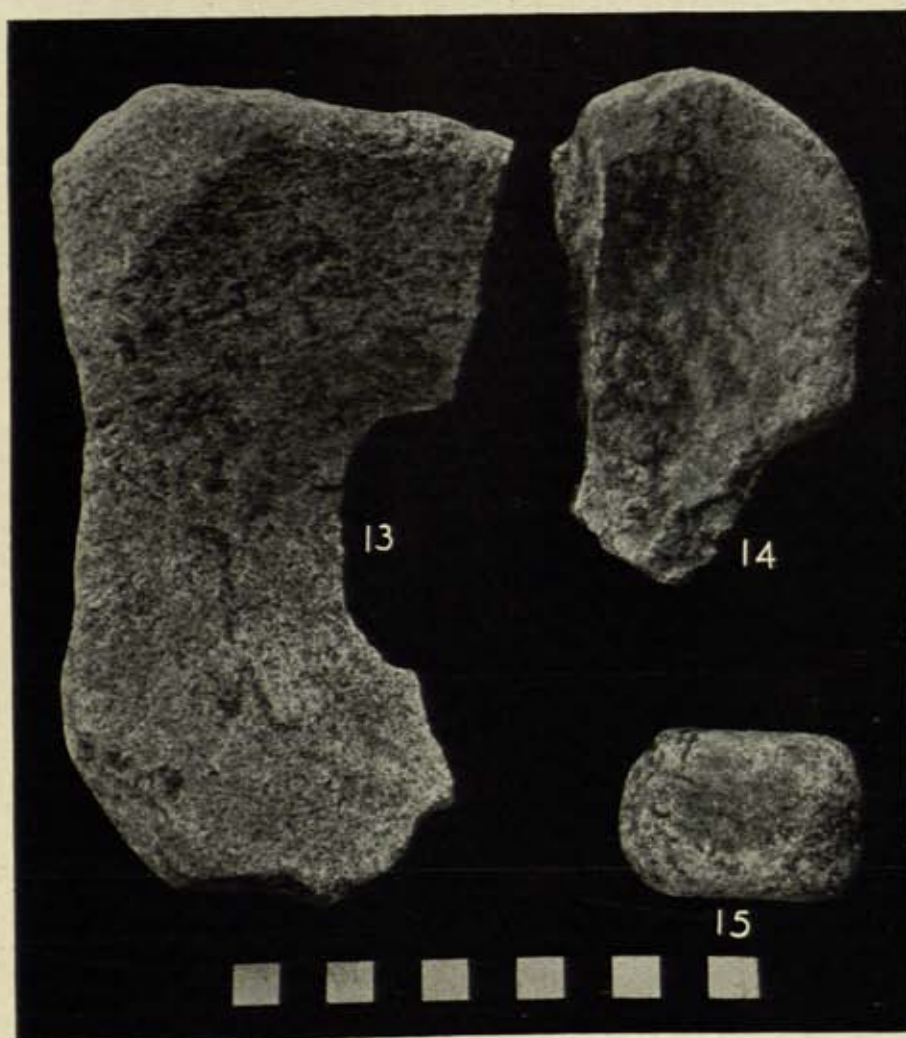


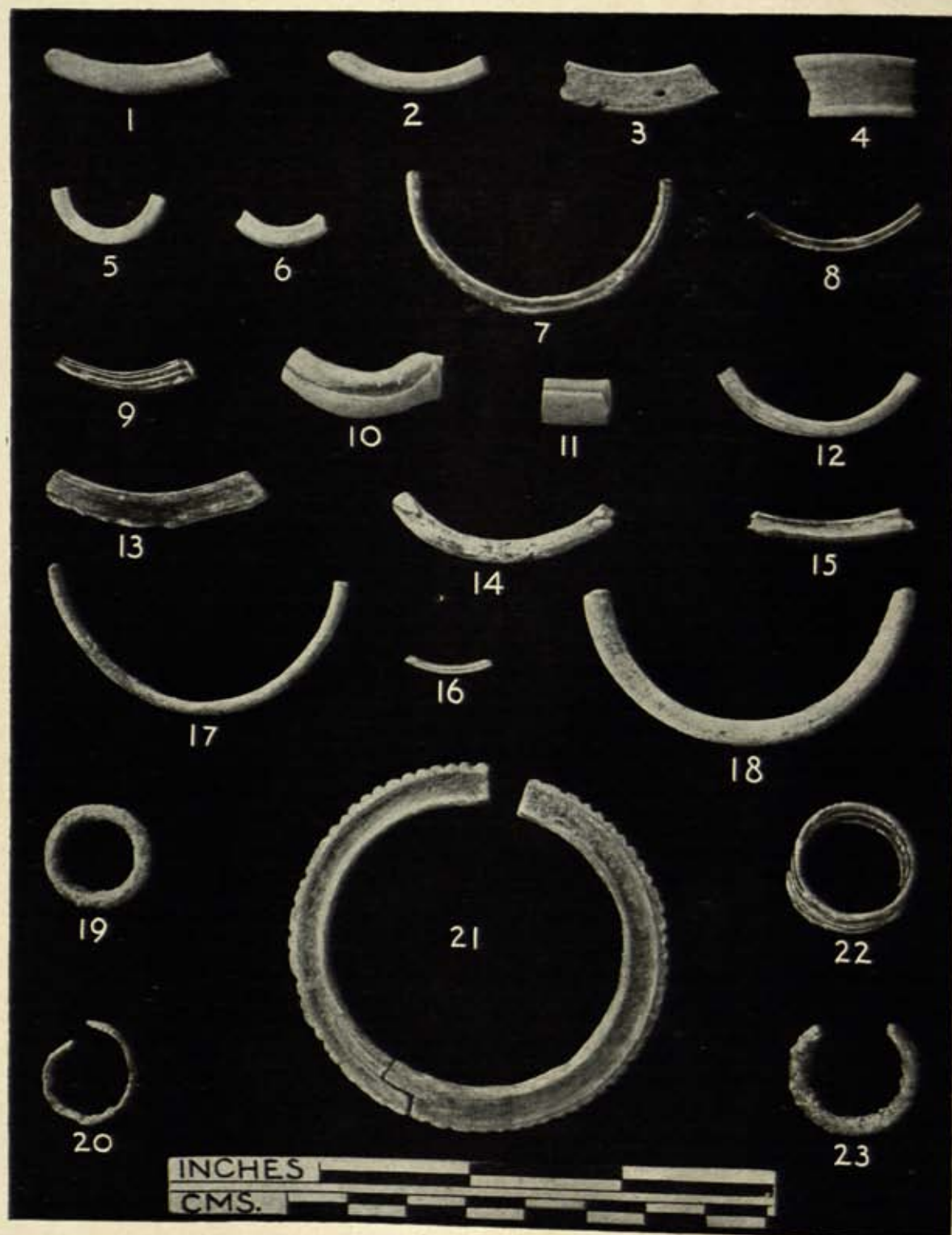
FIG. 40. Iron objects from Brahmagiri : 37-39, Megalithic culture ; 40-51, Āndhra culture.  $\frac{1}{2}$





*Brahmagiri: saddle-querns and rubber*



*Brahmagiri: bangles and rings*



and gold, were derived from Phase III (Āndhra). The abundance of glass in the Āndhra series is noteworthy. I know of no good evidence for the regular use of glass bangles in India prior to the first century A.D., although glass beads occur freely at earlier dates—perhaps as early as the fifth century B.C. at Taxila, Punjab—and I see no reason why future excavations should not carry back the initial date of the bangles also.

The earliest finger-ring from Brahmagiri is of plain bronze from a late Phase IB (Stone Axe) level. None came from the Megalithic levels, but five—three of bronze and two of shell—were found in the Āndhra levels. Of these, one is of the spiral type which occurs in widely different times and places—extending from Mohenjo-daro in the third millennium B.C. to Transcaucasia in the first millennium B.C. and Early Iron Age Europe of the first centuries B.C.–A.D., and indeed to modern India. But the distribution of so unspecialized a type has obviously no significance.

Pl. CXVIII

*Bangles and rings from the town-site*

1. Fragment of a shell bangle, oblong in section. From a middle stratum of the Megalith culture. (Br. 21A-3.)
2. Fragment of shell bangle, plano-convex in section. From an early stratum of the Āndhra culture. (Br. 22-122.)
3. Fragment of a flat shell bangle. From an early stratum of the Āndhra culture. (Br. 22-291.)
4. Fragment of a shell bangle, plano-concave in section, with out-turned edges. From a middle stratum of the Āndhra culture. (Br. 23-1.)
- 5-6. Fragments of shell finger-rings, oblong in section. From an early stratum of the Āndhra culture. (Br. 22-161 and Br. 22-114 respectively.)
- 7-8. Fragmentary bangles of black glass, plano-convex in section. From low levels of the Āndhra culture. (Br. 22-427 and Br. 21-148 respectively.)
9. Fragmentary bangle of black glass, plano-convex in section, with three grooves along the circumference. Unstratified. (Br. 23-11.)
- 10-11. Fragmentary bangles of stratified glass (a slip of yellow on grey). From middle levels of the Āndhra culture. (Br. 21-77 and Br. 21-96 respectively.)
12. Fragmentary bangle of sky-blue, translucent glass, plano-convex in section. From a late stratum of the Āndhra culture. (Br. 22-12.)
13. Fragmentary bangle of light green, translucent glass, triangular in section. From a late stratum of the Āndhra culture. (Br. 23-6.)
14. Fragmentary bangle of vitrified clay, plano-convex in section. From a late stratum of the Āndhra culture. (Br. 22-2.)
15. Fragment of a bone bangle, oblong in section. From a middle stratum of the Āndhra culture. (Br. 22-45.)
16. Fragment of a gold wire, .075 inch in thickness, presumably part of a bangle. From a low stratum of the Āndhra culture. (Br. 16A-9.)
- 17-18. Fragmentary bronze bangles, plano-convex and oval respectively in section. From late levels of the Āndhra culture. (Br. 21-7 and Br. 23-7 respectively.)
19. Bronze finger-ring, plano-convex in section. From a late stratum of the IB culture. (Br. 22-702.) See also fig. 41, 4.
20. Finger-ring of a thin strip of bronze. From a middle stratum of the Āndhra culture. (Br. 21-121.)
21. Bronze bracelet, with indented edge. From a middle stratum of the Āndhra culture. (Br. 22-35.) See also fig. 41, 8.
22. Spiral ring of bronze. From a middle stratum of the Āndhra culture. (Br. 22-117.) See also fig. 41, 7.
23. Bronze ring, roughly circular in section. From a late stratum of the Āndhra culture. (Br. 23-9.)



## Pl. CI B and fig. 41

Pl. CI B shows the four copper bangles (fig. 41, 6) lying in association with splinters of human bone, beads of gold, steatite and serpentine, and a conch-shell in the pit-circle, Megalith IX.

(n) *Beads*(i) *From the cists*

Of the six cists excavated in 1947, three (nos. IV, VI and VIII) yielded beads.

From Megalith IV were obtained thirty-nine tiny white beads of the mineral magnesite or dolomite.<sup>1</sup> They are similar to minute beads found at Chanhudaro and described as of 'steatite'.<sup>2</sup> They lay closely scattered amidst pots and iron objects and formed a part of the offerings placed in the cist prior to the insertion of the bones. The types represented are: standard-cylinder-circular, standard-barrel-circular, short-cylinder-circular and short-barrel-circular.<sup>3</sup>

In Megalith VI were found two terracotta ring-like beads which may rather have been spindle-whorls.

From Megalith VIII were recovered forty-four tiny white beads of magnesite, of types similar to those from Megalith IV, together with four tiny standard-barrel-circular beads of the same material but of a light green colour. All these lay in a shallow dish.

The length and diameter of some of these tiny beads are:  $\cdot 013 \times \cdot 035$ ;  $\cdot 021 \times \cdot 037$ ; and  $\cdot 051 \times \cdot 055$  inches respectively.

(ii) *From the pit-circles*

Two (nos. II and IX) out of the four pit-circles opened yielded beads.

From Megalith II were obtained two terracotta beads or whorls (pl. CXIX, 5) similar to those from Megalith VI (above).

From Megalith IX were recovered one steatite, one serpentine and thirty-three gold beads, all of which lay closely scattered in association with four copper bangles, a conch shell and two splinters of human bone (above p. 199 and pls. CXIX, 3-4, and CXX B). The two steatite and serpentine beads were respectively of standard-barrel-circular and long-barrel-circular type. Of the thirty-three gold beads, thirty are long-cylinder-circular, while three are disc-cylinder-circular.

(iii) *From the town-site*

The cuttings (Br. 17-Br. 23) on the town-site yielded a total of seventy-seven beads of magnesite, shell, terracotta, agate, carnelian, glass, jasper and steatite, together with a solitary shell pendant. The number is fairly low, even in view of the limited nature of the excavations: the complete absence of cores and unfinished beads indicates that on the sites excavated there was no bead-manufacturing industry.

*Magnesite* is the material of the largest number (twenty-one). Of these, twelve were obtained from various levels of the IB culture (especially towards its middle and late levels), three from the Megalithic and six from the Āndhra levels. The commonest shape in this material is the disc-cylinder-circular type (pl. CIX, 7-9) of which nine specimens were

<sup>1</sup> Report from Dr. Jhingram, Petrologist in the Geological Survey of India.

<sup>2</sup> E. J. H. Mackay, *Chanhudaro Excavations, 1935-36* (American Oriental Society, New Haven, 1943), p. 42 and pl. XCIII, 5.

<sup>3</sup> The classification is that of H. Beck in *Archaeologia*, LXXVII (1928), 1ff.



recovered. Of other forms, the short-cylinder-circular is represented by three beads (pl. CXIX, 13), and the short-convex-bicone-circular type (pl. CXIX, 19) and long-cylinder-oblate (pl. CXIX, 25) by one each. The remaining seven beads are tiny (the length and diameter of some of these being  $.05 \times .015$  inches and  $.066 \times .133$  inches respectively) and represent the following shapes: disc-barrel-circular; short-barrel-circular; short-truncated-cone-circular; short-truncated-bicone-circular and short-truncated-convex-bicone-circular.

*Shell*, which comes next to paste in order of frequency, is the material of seventeen beads and a pendant. They are distributed as follows: eleven from the various levels of the IB culture, one from the Megalithic and five from the Āndhra culture. The pendant, which has a long cylindrical profile with a rectangular stump at one end and a rectangular cross-section (pl. CXIX, 35), was recovered from a late Āndhra layer, and may have been an intrusion. Shell, like magnesite, was a favourite bead-material in the IB culture, and the commonest shape again was the disc-cylinder-circular (pl. CXIX, 11), of which eight specimens were recovered. The other shapes in this material are: short-barrel-circular (pl. CXIX, 15); long-barrel-circular (pl. CXIX, 27); short-cylinder-circular (pl. CXIX, 14); and long-ellipsoid-circular (pl. CXIX, 30). Three shells, longitudinally perforated to form a bead (pl. CXIX, 36) were also found. The practice of using longitudinally-perforated small shells as beads continues today in many parts of India.

*Terracotta*, unlike magnesite and shell, appeared very late at Brahmagiri as a bead-material. It seems to have been absent from both the IA and IB phases of the Stone Axe culture, except for two standard-barrel-circular beads (pl. CXX, 38) from the late levels of the IB. The Megalithic levels, too, produced only two terracotta beads, while the Āndhra levels yielded thirteen. All these beads are well-baked and four of them have a thin black burnished slip. Five are long-barrel-circular (pl. CXX, 39) and one is spherical (pl. CXX, 37). Four pear-shaped beads with a truncated apex (pl. CXX, 42-3) have been obtained from the Āndhra levels: there is none from the earlier cultures. Pear-shaped beads without any truncation of the apex but with the addition of two grooves near the rounded base (pl. CXX, 44) are represented by three specimens, again from the Āndhra levels. Of whorl-beads (pl. CXX, 40-1), four examples were obtained, two each from the Megalithic and Āndhra levels.

Of *agate*, two varieties, banded-black and banded-red, were used: these account for three and four beads respectively. The shapes represented are: long-barrel-circular (pl. CXIX, 28); standard-cylinder-circular (pl. CXIX, 24); long-cylinder-circular (pl. CXIX, 26); and spheroid (pl. CXIX, 20). Except for this last-mentioned spheroid bead from phase IA of the Stone Axe culture, all the agate beads came from Āndhra levels.

*Carnelian* is the material of five beads, of which two are spherical (pl. CXIX, 21) and one each is long-bicone-hexagonal (pl. CXIX, 32), long-bicone-septagonal (pl. CXIX, 33), and short-barrel-circular (pl. CXIX, 16). Like the agate beads the carnelian examples are confined to the Āndhra levels.

*Glass* was used for five beads, all from the Āndhra levels. These include: two short-barrel-circular beads (pl. CXIX, 17), one each of deep and light-green translucent glass; one short-oblate-circular (pl. CXIX, 18) of green opaque glass, one spheroid (pl. CXIX, 22) of sky-blue opaque glass, and one long-barrel-groove-collared (pl. CXIX, 34) of deep green opaque glass.

Collared beads have a very wide distribution in time and space, both in India and elsewhere.<sup>1</sup> The Indian sites known to yield collared beads are: Arikamedu,<sup>2</sup> near Pondicherry

<sup>1</sup> See *Ancient India*, no. 2 (1946), p. 97.

<sup>2</sup> *Ibid.*, pp. 97-98.



(from pre-Arretine, Arretine, and post-Arretine strata, first century A.D.); Kondāpur, and Māski in Hyderabad State (from strata reported to be of the Āndhra period); Śisūpāl near Bhubaneshwar in Orissa; Pāṭaliputra in Bihar; Durgāpur in Bengal; Kauśāmbī near Allahabad in the United Provinces; Bhīr Mound and Sirkap at Taxila in the Punjab (c. third century B.C. to second century A.D.); and Chandravalli. Outside India, the type occurs at Dura-Europos on the Euphrates apparently late in the first century B.C.,<sup>1</sup> and further west at earlier dates.<sup>2</sup>

Of *jasper*, only two beads were recovered: one, spheroid in shape (pl. CXIX, 23), from a middle stratum of the Āndhra culture, and the other, long-barrel-circular in shape (pl. CXIX, 29), from a middle Megalithic level.

*Steatite* was used for three beads. One of these, long-bicone-circular in form (pl. CXIX, 31), was obtained from an early stratum of the Megalithic culture; another, *ghaṭa*-shaped (pl. CXX, 45), came from a late Āndhra level. The material in the third case is indurated steatite, and the example—a disc with central hubs on both sides (pl. CXIX, 12)—was recovered from an early Megalithic level.

#### Typical beads

##### (i) From the pit-circles

#### Pl. CXX B

1. Disc-cylinder-circular; gold. (Br. Megalith IX-11.)
2. Long-cylinder-circular; gold. (Br. Megalith IX-11.)

#### Pl. CXIX

3. Standard-barrel-circular; steatite. (Br. Megalith IX-18.)
4. Long-barrel-circular; serpentine. (Br. Megalith IX-20.)
5. Whorl-bead; terracotta. (Br. Megalith II-23.)

##### (ii) From the cist-circles

6. Whorl-bead; terracotta. (Br. Megalith VI-18.)

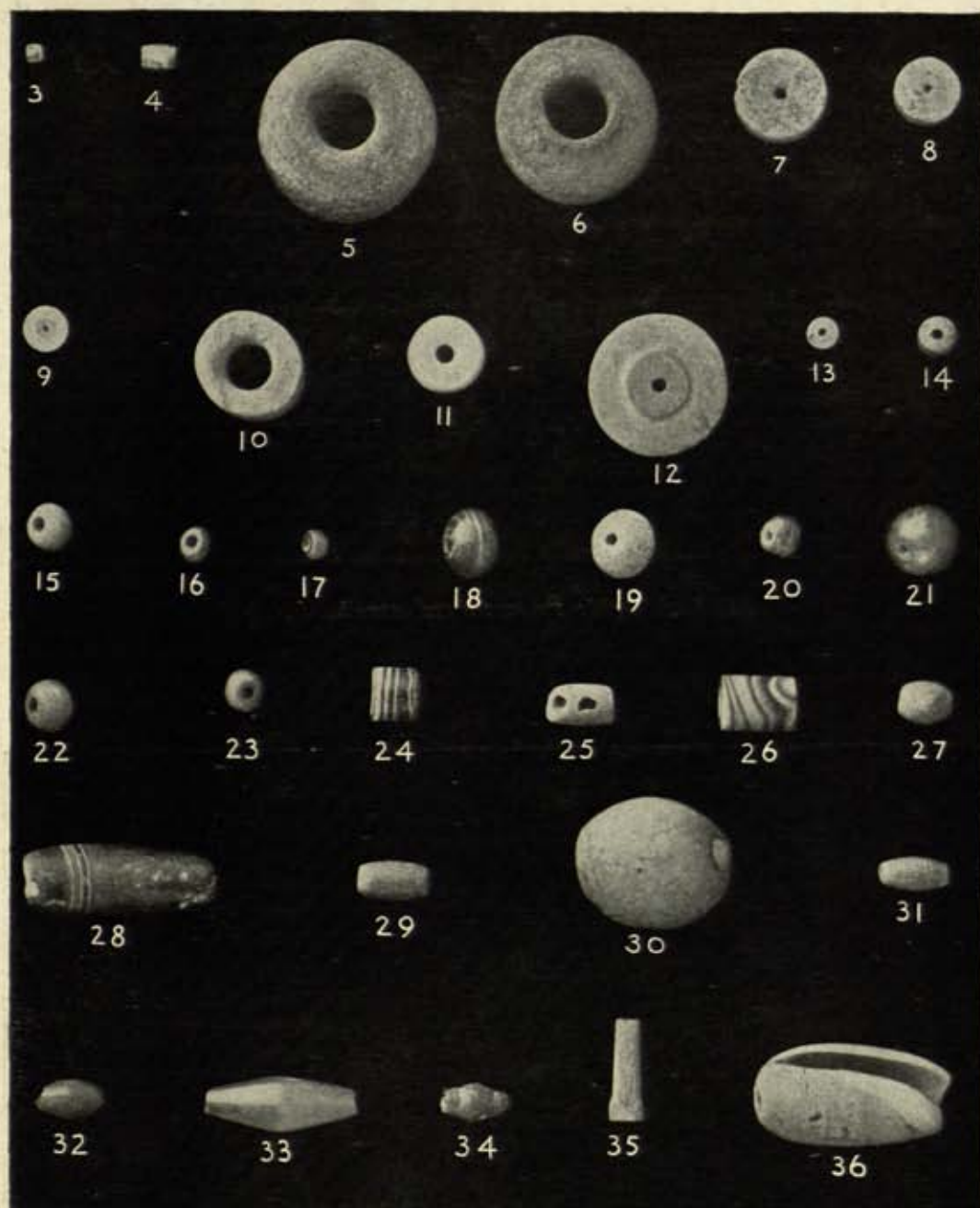
##### (iii) From the town-site

7. Disc-cylinder-circular; magnesite; from an early stratum of the Megalith culture. (Br. 21-40.)
8. Disc-cylinder-circular; magnesite; from a late stratum of the IB culture. (Br. 21-86.)
9. Disc-cylinder-circular; magnesite; from a late stratum of the IB culture. (Br. 21-86A.)
10. Disc-cylinder-circular; shell; from an early stratum of the Āndhra culture. (Br. 22-466.)
11. Disc-cylinder-circular; shell; from a middle stratum of the IB culture. (Br. 21-208.)
12. Disc with central hubs on both sides; indurated steatite from an early stratum of the Megalith culture. (Br. 21A-4.)
13. Short-cylinder-circular; magnesite; from an early stratum of the Megalith culture. (Br. 22-232.)
14. Short-cylinder-circular; shell; from a middle stratum of the IB culture. (Br. 17-61.)
15. Short-barrel-circular; shell; from a middle stratum of the IB culture. (Br. 22-571.)
16. Short-barrel-circular; carnelian; from a late stratum of the Āndhra culture. (Br. 21-14.)
17. Short-barrel-circular; glass, green, translucent; from a late stratum of the Āndhra culture. (Br. 22-105.)
18. Short-oblate-circular; glass, green, opaque; from a middle stratum of the Āndhra culture. (Br. 21-69.)
19. Short-convex-bicone; magnesite; from a late stratum of the IB culture. (Br. 21-155.)
20. Spheroid; agate, banded-black; from the IA culture. (Br. 22-650.)

<sup>1</sup> *The Excavations at Dura-Europos, 9th session, 1935-6: Part II, the Necropolis*, by N. P. Toll (Yale University Press, 1946), pp. 15 and 70, and pl. LI, tomb 36, loculus XII. The same tomb contained a silver coin of Orodes II (51-38 B.C.).

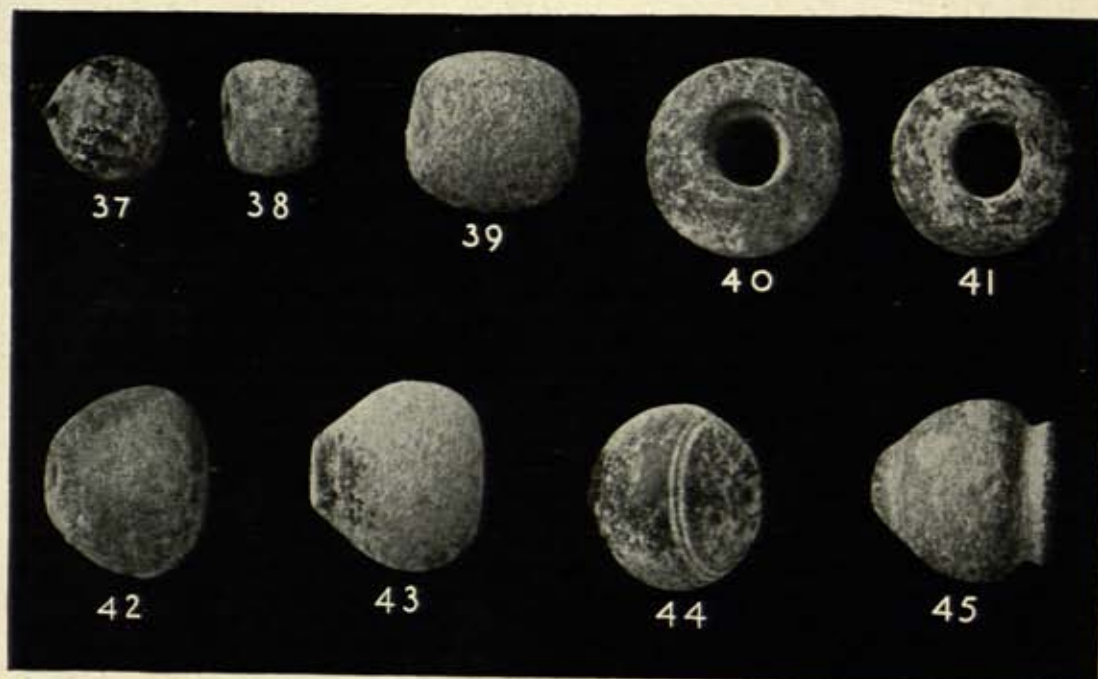
<sup>2</sup> *Ancient India*, no. 2, p. 98.



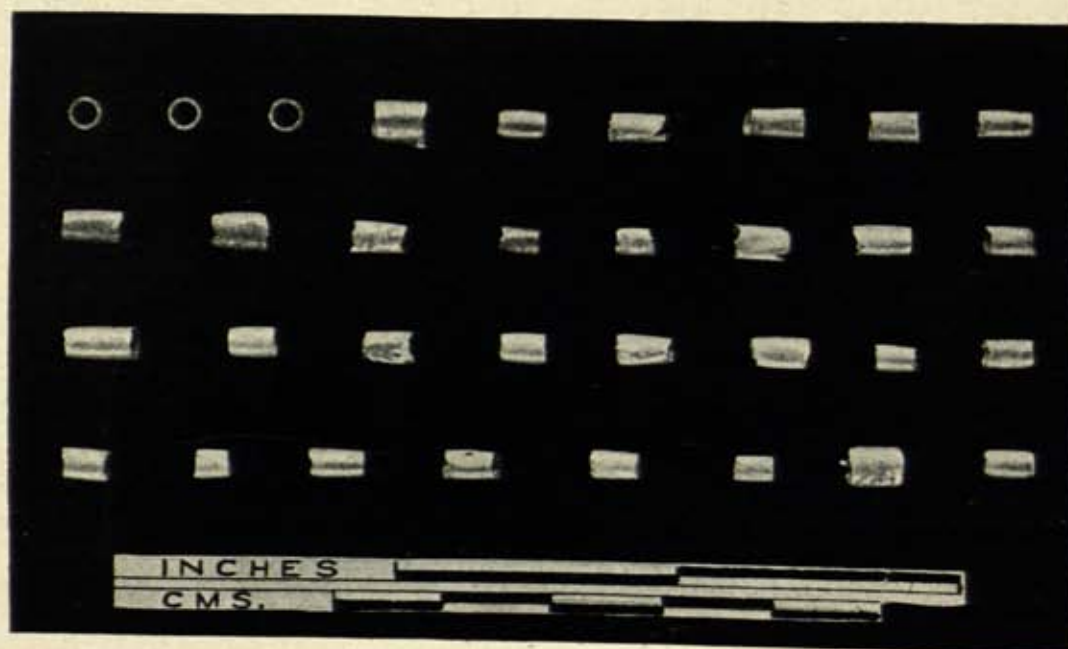


*Brahmagiri: beads. 1*





A. *Brahmagiri: ferracotta and stone beads.* †



B. *Brahmagiri: gold beads from megalith IX*



21. Spherical; carnelian; from a late stratum of the Āndhra culture. (Br. 22-15.)
22. Spheroid; glass, sky blue, opaque; from a late stratum of the Āndhra culture. (Br. 22-41.)
23. Spheroid; jasper from a middle stratum of the Āndhra culture. (Br. 22-112.)
24. Standard-cylinder-circular; agate, banded black; from an early stratum of the Āndhra culture. (Br. 22-465.)
25. Long-cylinder-oblate; magnesite; from a late stratum of the Āndhra culture. (Br. 22-17.)
26. Long-cylinder-circular, agate, banded red; from an early stratum of the Āndhra culture. (Br. 22-464.)
27. Long-barrel-circular; shell; from a late stratum of the Āndhra culture. (Br. 22-233.)
28. Long-barrel-circular; agate, banded black; from a middle stratum of the Āndhra culture. (Br. 21-20.)
29. Long-barrel-circular; jasper; from a middle stratum of the Megalithic culture. (Br. 22A-2.)
30. Long-ellipsoid-circular; shell; from a late stratum of the Āndhra culture. (Br. 22-120.)
31. Long-bicone-circular; steatite; from an early stratum of the Megalithic culture. (Br. 21-105.)
32. Long-bicone-hexagonal; carnelian; from a middle stratum of Āndhra culture. (Br. 22-118.)
33. Long-bicone-septagonal; carnelian; from a middle stratum of the Āndhra culture. (Br. 22-73.)
34. Long-barrel-groove-collared; glass, green, opaque; from a middle stratum of the Āndhra culture. (Br. 22-119.)
35. Pendant; shell; from a late stratum of the Āndhra culture. (Br. 22-113.)
36. Shell, longitudinally perforated to form a bead; from a late stratum of the IB culture. (Br. 19-6.)

#### PL. CXX A

37. Spherical; terracotta; from an early stratum of the Āndhra culture. (Br. 19-5.)
38. Standard-barrel-circular; terracotta; from a late stratum of the IB culture. (Br. 19-5.)
39. Long-barrel-circular; terracotta; from a middle stratum of the Āndhra culture. (Br. 21-13.)
40. Whorl-bead; terracotta; from a late stratum of the Megalithic culture. (Br. 21-271.)
41. Whorl-bead; terracotta; from an early stratum of the Āndhra culture. (Br. 21-584.)
42. Short-pear-shaped with a truncated apex; terracotta; from a late stratum of the Āndhra culture. (Br. 18-2.)
43. Standard-pear-shaped with a truncated apex; terracotta; from a middle stratum of the Āndhra culture. (Br. 21-28.)
44. Standard-pear-shaped with two grooves near the base; terracotta; from a late stratum of the Āndhra culture. (Br. 22-226.)
45. *Ghaṭa*-shaped; steatite; from a late stratum of the Āndhra culture. (Br. 22-152.)

#### (o) *Miscellanea*

#### Fig. 41

This figure illustrates copper and bronze objects and a button of steatite. Nos. 1-5 are from the IB (Stone Axe) culture; no. 6 is from a pit-circle, Megalith II; and nos. 7-10 are from Āndhra levels.

1. Bronze rod,<sup>1</sup> probably a pin, with circular section thinning towards one end. From inside burial-urn T36 in Br. 21, in an early stratum of the IB culture; see section, fig. 8. (Br. 21-282.)
2. Copper rod,<sup>2</sup> original shape uncertain but roughly circular in section. From a middle stratum of the IB culture. (Br. 17-80.)
3. Copper object,<sup>3</sup> possibly a flat axe; the presumed cutting edge is obscured by incrustation. From a middle stratum of the IB culture. (Br. 21-121.)

<sup>1</sup> Archaeological Chemist's analysis; copper 47%, tin 9.0%, iron 1.05%, oxidation products 44.48%.

<sup>2</sup> Analysis: copper 94.13%, oxidation products 5.87%.

<sup>3</sup> Analysis: copper 44.87%, iron 1.37%, contaminated silica 51.40%.



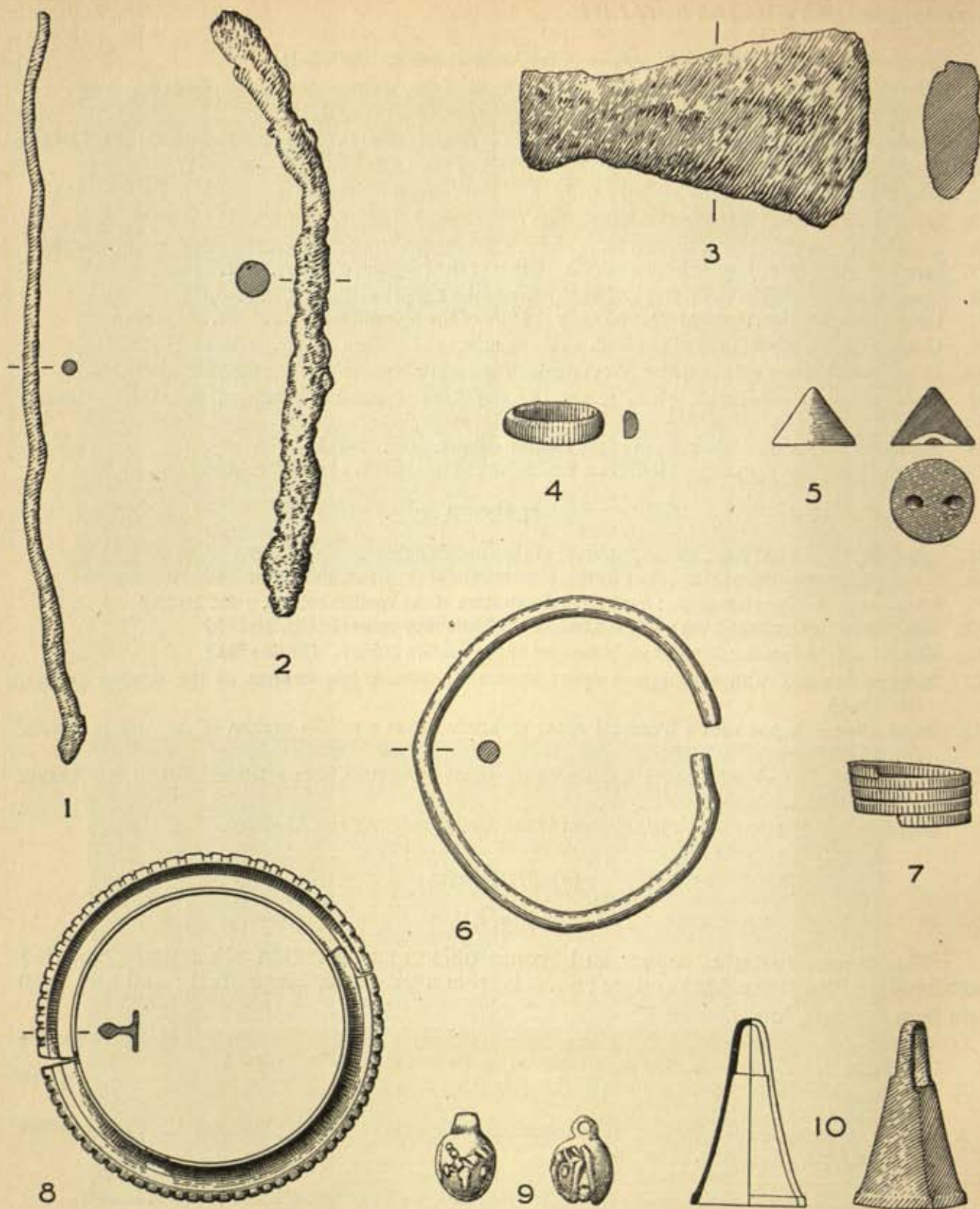
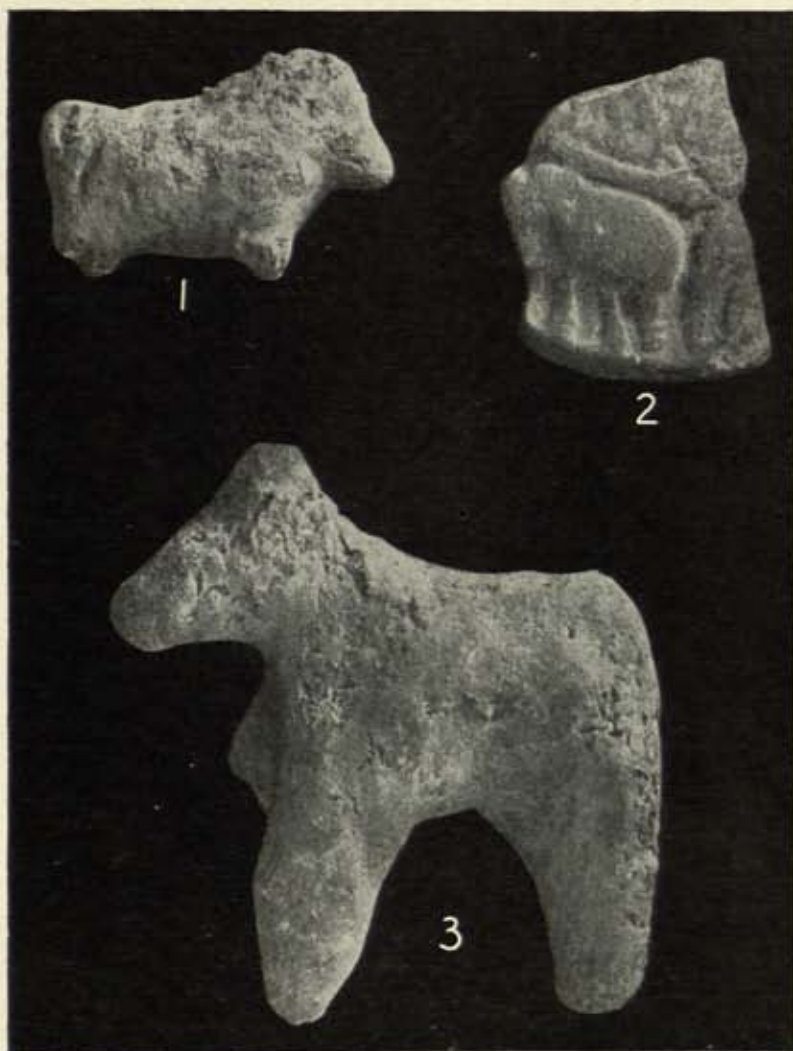


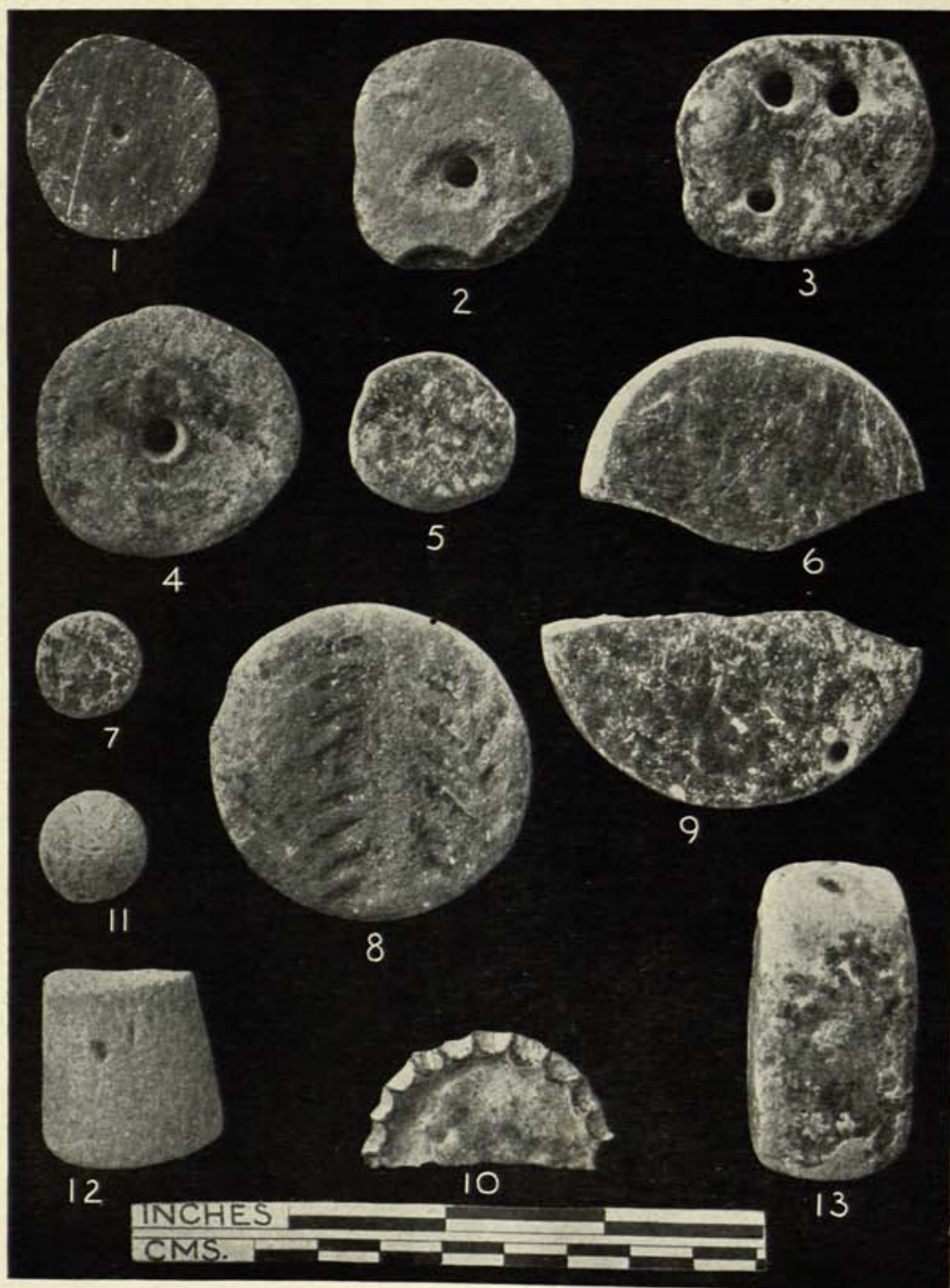
FIG. 41. *Miscellanea, all copper or bronze except 5 (steatite).* †





*Brahmagiri: clay objects. 1*





*Brahmagiri : clay objects from the town-site*



4. Bronze finger-ring.<sup>1</sup> From a late stratum of the IB culture. (Br. 22-702.) See also pl. CXVIII, 19.
5. Conical button of steatite, with V-shaped perforation. From an early stratum of the IB culture. Conical buttons with a similar V-shaped perforation occur in the Bronze Age in the West, but no analogy seems to be forthcoming from India. (Br. 21-279.)
6. Copper bangle,<sup>2</sup> circular in section. From a pit-circle. (Br. Megalith IX, 23.) See also pl. CI B.
7. Spiral ring of bronze. From a middle stratum of the Āndhra culture. (Br. 22-117.) See above, p. 263, and pl. CXVIII, 22.
8. Bronze bracelet, with indented edge. From a middle stratum of the Āndhra culture. (Br. 22-35.) See also pl. CXVIII, 21.
9. Bronze rattle, with decoration in low relief resembling a grotesque face. From a late stratum of the Āndhra culture. (Br. 21-94.)
10. Bronze bell, pyramidal with loop. From an early stratum of the Āndhra culture. (Br. 22-157.)

### Pl. CXXI

No terracotta figurines were found in the cists or pit-circles or in the 'Megalith' strata of the town-site. An unbaked animal figurine was recovered from the 'Stone Axe' layers, and a terracotta object ornamented with a row of elephants from the 'Āndhra' layers. No human figurines were obtained.

- (1) Roughly modelled animal (pig or sheep?): sun-dried. From an early stratum of the IB culture. (Br. 21-258.)
- (2) Fragment of a lid-like (?) object with a frieze of elephants on the exterior: well baked. From a middle stratum of the Āndhra culture. (Br. 20-7.)
- (3) Roughly modelled animal, probably a horse or donkey; eyes indicated by pellets; ears mutilated; tail uncertain: indifferently baked. Unstratified. (Br. 23-4.)

### Pl. CXXII

In addition to the terracotta figurines described above, the town-site yielded thirty-six discs made mostly from potsherds, a terracotta 'marble', a truncated terracotta cone (gaming piece?), and a perforated cubical terracotta object of indeterminate use. Of the discs, one was obtained from the upper levels of the IB culture, two from the Megalith culture, and the rest from the Āndhra culture. The absence of such discs from the IA culture may, however, be accidental. When pierced, these discs were presumably spindle-whorls; the unpierced examples were doubtless gaming-counters.

1. Spindle-whorl, incompletely pierced, made from a grey potsherd. From a late stratum of the IB culture. (Br. 17-10.)
2. Spindle-whorl of grey ware with buff surface. From a low stratum of the Megalith culture. (Br. 21-285.)
3. Disc with three perforations, made from a grey sherd with buff surface. From a middle stratum of the Megalith culture. (Br. 22-522.)
4. Spindle-whorl made from a sherd of reddish ware with red-brown slip. From an upper stratum of the Āndhra culture. (Br. 18-6.)
5. Counter of grey ware with red-brown slip. From a low stratum of the Āndhra culture. (Br. 22-407.)
6. Part of counter of reddish ware with red slip. From an early stratum of the Āndhra culture. (Br. 22-641.)
7. Counter of grey ware with red-brown slip. From a low stratum of the Āndhra culture. (Br. 22-167.)

<sup>1</sup> Analysis: copper 98.7%, traces of nickel; oxidation products 1.3%.

<sup>2</sup> Analysis: copper 74.69%, tin 15.81%, zinc 2.72%, nickel 0.38%; oxidation products 6.40%.



8. Disc with incised herring-bone decoration, of buff ware with reddish slip. From an upper stratum of the Āndhra culture. (Br. 18-4.)
9. Part of a disc of grey ware, with a perforation near the circumference. From a late stratum of the Āndhra culture. (Br. 23-37.)
10. Disc of grey ware with finger-nail decoration round the edge. From a low stratum of the Āndhra culture. (Br. 22-158.)
11. 'Marble' of roughly baked buff fabric. From a low stratum of the Āndhra culture. (Br. 21-133.)
12. Truncated cone of grey fabric, presumably a gaming-piece. From a late stratum of the Āndhra culture. (Br. 21-10.)
13. Longitudinally perforated object of indeterminate use, square in section, made of grey-buff fabric with red-brown slip. From a low stratum of the Āndhra culture. (Br. 21-6.)

### PART III.—CHANDRAVALLI

Chandravalli or Moon-village is the traditional name of a valley situated immediately west of the fortified granite hill of Chitradurga which in turn gives its name to the adjacent district-town of Chitaldrug. The site has long been known as a source of Sātavāhana (Āndhra) coins, and is a centre of legend and semi-legendary history. It has been described and mapped by Dr. M. H. Krishna, who, following trial-excavations carried out some twenty years previously, instituted a new series of excavations in 1929. A general description of these excavations has been issued<sup>1</sup> but the finds have not yet been published.

An examination of the sides of the two watercourses which traverse the valley from south to north indicates that the main body of the ancient town was some 800 yards long in that direction, and the configuration of the valley suggests that it may have had an approximately similar width. Evidences of occupation extend into the middle ages, but excavation has shown that the main phase coincided with the Sātavāhana régime of the first and second centuries A.D. Abundant coins which include one or two denarii of Augustus (23 B.C.-A.D. 14) and three of Tiberius (A.D. 14-37) suggested that, to a greater extent than Brahmagiri, the town had lain in the main path of Āndhra culture; and it was with a view to adding precision to our knowledge of this culture that three further trial-pits were dug into the site in 1947.

#### (i) THE CUTTINGS (1947)

The cuttings made in 1947 were named Ch. 43-Ch. 45, and were as follows:—

*Ch. 43* lay immediately to the east of Dr. Krishna's excavation Ch. 15,<sup>2</sup> and consisted of an area 50 feet × 20 feet excavated to the natural soil. This was reached at an average depth of 9 feet below the surface, but took a sudden dip to a depth of 16 feet towards the south and south-west. This cutting yielded clear stratification and is the basis of the present report. Fragments of two structures were found, namely:

*Drain A:* An underground drain, 1 foot wide, flanked on either side by a single bricks set on edge, built into layer 7. It had no covering, but was traced to a length of only 2 feet.

*Wall B:* A line of bricks only one course high; traced to a maximum length of 6 feet. It was built on layer 6.

<sup>1</sup> 'Excavation at Chandravalli (Mysore State)', *Supplement to An. Rep. of the Mysore Arch. Dept. for the year 1929* (Bangalore, 1931).

<sup>2</sup> See map, *ibid.*, pl. II.



Ch. 44 lay to the south-west of Dr. Krishna's site Ch. 37. It measured 20 feet by 20 feet and the natural soil was reached at an average depth of  $6\frac{1}{2}$  feet below the surface. No fewer than eight large pits so complicated the stratification as to rob the evidence of the precision required in the present state of knowledge. A collapsed brick wall lay on layer 7, and a fragmentary rubble foundation was found high up in level 2.

Ch. 45 lay adjacent to Dr. Krishna's site Ch. 36, and consisted of an area of 20 feet by 20 feet, which was excavated to the natural soil, reached at an average depth of  $5\frac{1}{2}$  feet below the surface. There are indications of early structures which require exploration.

## (ii) THE CHANDRAVALLI POTTERY

In the Chandravalli section Ch. 43, the lower levels yielded pottery turned on the slow wheel and of the distinctive red-and-black fabric of the Megalith culture at Brahmagiri. The similarity was reinforced by the occurrence of certain similar, if rather rudimentary, forms at both places, notably Brahmagiri types C7, C17a, and C18. Furthermore, in his excavations of 1928-29, Dr. Krishna found at Chandravalli a number of stone cists containing pottery of the same fabric, including tripod-pots and conical black lids comparable with the Brahmagiri types C25 and P3. A majority of the Ch. 43 types, however, were not closely represented at Brahmagiri, and the two industries are not identical. The difference extends to the cists on the two sites. No cist was found at Chandravalli in 1947, but, in the neighbourhood of the 'Central Rocks' at that site, Dr. Krishna found upwards of half-a-dozen, all of relatively small size (apparently not exceeding  $3 \times 2$  feet and usually smaller) and lacking both the port-hole and the surrounding circle. These small cists were in a ruined condition, and only one produced a human skeleton, which was found 'partly crushed'.....with head to west and hip to east with the limbs bent double over the body'.<sup>1</sup>

It is evident that in the lower levels of Chandravalli we have a culture linked, though only vaguely, with the Megalith culture of Brahmagiri. Dr. Krishna's small-cists were not dated but the soil surrounding them contained Sātavāhana coins 'and even one of silver coming from the Roman Empire' (probably a denarius of Tiberius). On the other hand, no coin was found actually inside a cist, and no example of the distinctive 'Āndhra' painted ware occurred amongst the abundant cist-pottery. So far as it goes, the evidence suggests that the Chandravalli cists did not belong to the developed Āndhra culture at that site, but that they did not long precede it and in fact overlapped it.

With this inference the evidence of cutting Ch. 43 is consistent (fig. 42). The lowest stratum in this fairly extensive cutting contained only pottery of the 'megalithic' fabric, with neither coins nor painted sherds. Overlying this was a stratum again containing much 'megalithic' ware, but now in association with Āndhra fabrics, including both the typical painted ware and fragments of 'beaked' dishes of the type to which rouletted decoration is sometimes applied. No rouletted sherd was actually found in this stratum, but the type, with or without rouletting, appears to be securely dated to the first and second centuries A.D. A little higher up, rouletted sherds were found immediately above the highest of the 'megalithic' sherds. The latter were completely absent from the remaining strata of the section.

It is evident that the main features of the Āndhra culture were intrusive. They included the use of coinage, the introduction of glass bangles, the partial use of the fast potter's

<sup>1</sup> Ibid., pp. 16, etc., and pls. IX-X.



# CHANDRAVALLI, CHITALDRUG, MYSORE STATE

## SECTION CH. 43

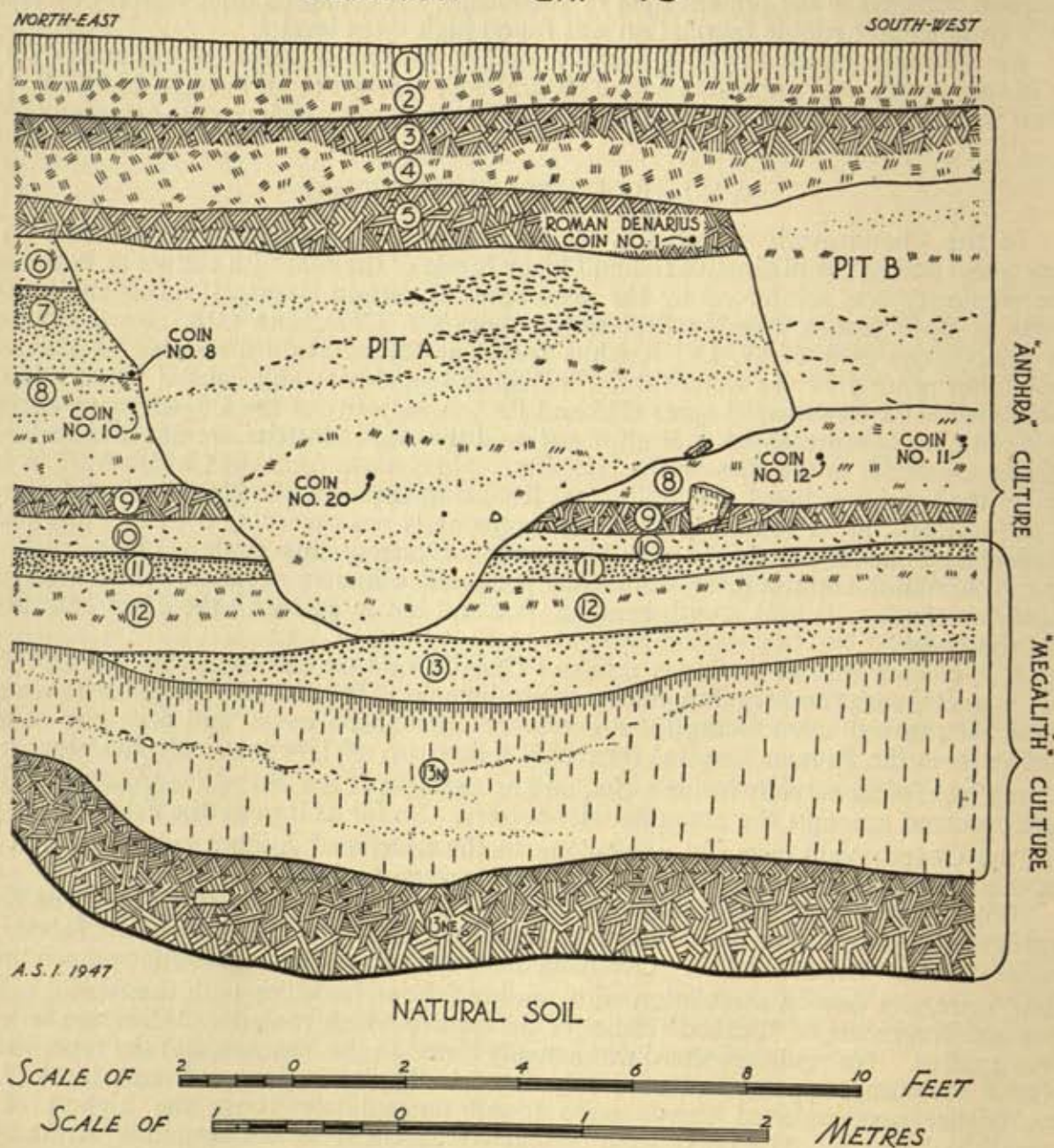


FIG. 42

wheel, and the manufacture of pottery painted in white or yellow lines under a russet-coloured slip. Occasional external contacts are represented by half-a-dozen Roman denarii of the first century A.D. and a small though definite fragment of a Mediterranean amphora (unstratified). The preceding local culture continued alongside the intruder for some time



Table showing the frequencies of sherds of the two cultures, layer by layer from top to bottom, in cutting Ch. 43 (fig. 42)

LAYER	I. MEGALITHIC	II. ĀNDHRA
1	....	113, including 1 yellow-painted sherd
2	....	217, including 1 polished red-ware sherd
3	....	555, including 36 yellow-painted sherds
4	....	852, including 12 yellow-painted and 3 polished red-ware sherds
5	....	1,370, including 25 yellow-painted and 17 polished red-ware sherds
6	....	2,048, including 196 yellow-painted and 12 polished red-ware sherds
7	....	4,046, including 307 yellow-painted and 28 polished red-ware sherds
8	....	2,645, including 573 yellow-painted and 10 polished red-ware sherds
9	....	1,934, including 1 rouletted, 547 yellow-painted and 13 polished red-ware sherds
10	....	1,870, including 2 rouletted, 528 yellow-painted and 11 polished red-ware sherds
11	28	1,495, including 441 yellow-painted and 5 polished red-ware sherds
12	7	345, including 99 yellow-painted and 1 polished red-ware sherds
13	142	623, including 138 yellow-painted and 21 polished red-ware sherds
13N	654	455, including 18 yellow-painted sherds
13NE	25	....

but, apart from the adoption of a simple 'megalithic' bowl-type by the latter, there was little cultural interchange. The story at Chandravalli is in this respect similar to that at Brahmagiri.

Chronologically, the Chandravalli evidence lacks precision, but the 'beaked' dish referred to above is the characteristic form to which rouletted decoration is sometimes applied, and is unlikely to have appeared much earlier than the middle of the first century A.D. at this remote inland site. On that basis, the devolved 'megalithic' culture came to an end here in the latter part of that century, after lingering for several decades alongside the more sophisticated 'Āndhra' culture.

This provisional conclusion harmonizes with new and unpublished evidence from another site. In 1947 J. M. Casal carried out further excavations at Arikamedu



(Pondicherry), and at one point found pottery of the familiar 'megalithic' fabric in the layers immediately overlying the natural soil. The maximum over-all height of these 'megalithic' layers was 3 feet: the two lowest were free from admixture, but the two highest (1-1½ feet in thickness) produced also typical 'Arikamedu' pottery, including rouletted dishes. The overlap of the two cultures was clearly demonstrated, and the equation between this evidence and that of Chandravalli and Brahmagiri is in this respect absolute, with the proviso that, on the coastal site, the foreign rouletted decoration may be expected to have occurred somewhat earlier than in the hinterland of Mysore.

As in the case of Chandravalli, the identity of the fabric of the 'megalithic' ware of Arikamedu with that of Brahmagiri is only partially supported by similarities of form. Two or three of the Arikamedu types are found at Brahmagiri: notably, a conical black lid with loop-handle similar to Brahmagiri P2, and dishes and bowls similar to Brahmagiri C16 and C17. Specific resemblances between the Arikamedu and Chandravalli 'megalithic' types are slight and cannot be regarded as significant. Essential correspondence is there limited to fabric and chronological position. Incidentally no megaliths have yet been found at or near Arikamedu.

We thus appear to have three ceramic industries which share a distinctive fabric, have occasional types in common, and are partially synchronous, although the bulk of the Brahmagiri material must be of earlier date than that of the other two sites. For our present purpose, the principal result of this comparative sketch is to confirm the middle of the first century A.D. as the approximate terminal date for the so-called 'megalithic' fabric in three local manifestations, with a 'hang-over' extending into the latter part of the century. Fig. 42 illustrates a typical portion of cutting Ch. 43, and should be considered in relation to the table on p. 273, which classifies the potsherds from the whole cutting stratigraphically.

### *Chandravalli 'Megalithic' pottery*

As already observed, the 'megalithic' ware of Chandravalli section Ch. 43 belongs to a well-defined class of predominantly black-and-red pottery. It is of a greyish buff fabric, is potted on a slow wheel, and has a burnished surface, occasionally with the addition of a salt glaze.<sup>1</sup> It is represented both in black and black-and-red ware, in the latter case usually with the black towards the rim as a result of inverted firing. As a whole, the finish of the Chandravalli 'megalithic' pottery is inferior to that of Brahmagiri. Furthermore, as noted above (p. 271), only occasional types are common to the two sites. Graffiti are entirely absent at Chandravalli but are abundant at Brahmagiri, mostly in the cists (p. 244). The only decoration on the Chandravalli 'megalithic' comprises: (a) incised herring-bone pattern and zigzags round the shoulder (type M22), and (b) oblique notches round the shoulder (type M13). The commonest type is the bowl (type M1), which continues into the Āndhra culture and constitutes one of the principal types to which the typical Āndhra criss-cross decoration was applied.

The following is a representative series of 'megalithic' pots and sherds from cutting Ch. 43, level 13N, the lowest level save one (figs. 43-44).<sup>2</sup>

- M1. Straight-sided bowl of black-and-red ware, salt-glazed. It has a sharpened and slightly everted rim and a flat base. The type is represented also in black ware.

<sup>1</sup> Chemist's note. This feature was probably adopted from the intrusive 'Āndhra' industry, which used salt-glazing freely. Salt-glazing is completely absent from the 'megalithic' pottery at Brahmagiri.

<sup>2</sup> This and the following lists of Chandravalli sherds have been prepared by Mr. B. K. Thapar.







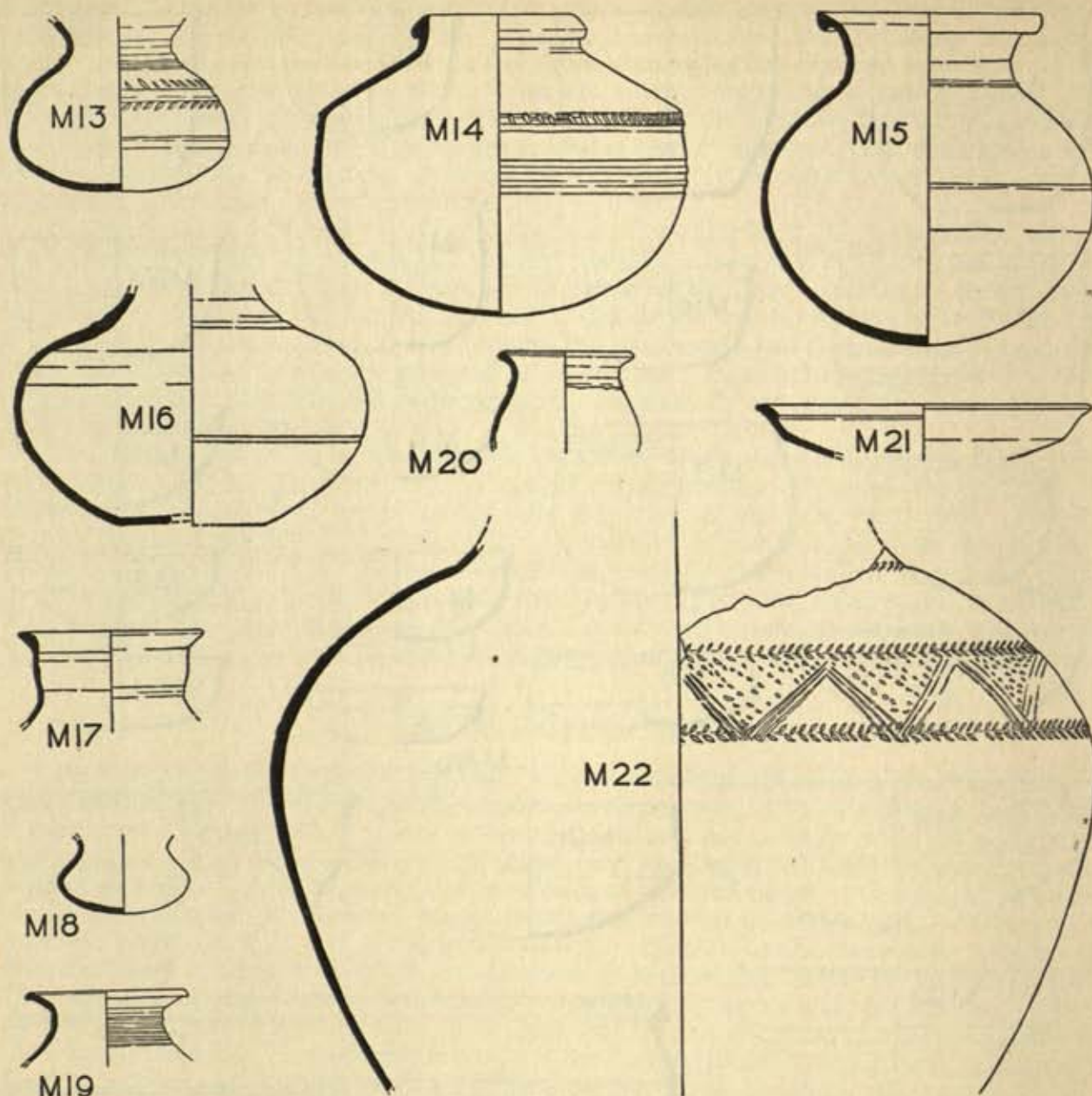


FIG. 44. Pottery of 'Megalithic' fabric from Chandravalli.  $\frac{1}{4}$

- M1a. As above but with wider sides; also salt-glazed.  
 M1b. Burnished black-and-red ware bowl, with internally levelled rim and slightly flattened base.  
 M1c. Fragment of a bowl of similar type but distinguished by a groove below the rim.  
 M1d. Fragment of a bowl of the same type but grooved round the body.  
 M1e. Smaller bowl of similar ware, with grooved rim.  
 M2. Bowl of black ware with a slightly flared rim and a flat base. Similar bowls are recorded from the  
 Adichanallur urn-field—A. Rea, *Cat. of Prehist. Antiquities* (Madras, 1925), pl. VI, 36.  
 M2a. Variant of M2 with wider sides; black-and-red ware.  
 M2b. Variant of M2 distinguished by a markedly convex base.



- M3. Bowl of black-and-red ware with an externally grooved rim, a globular body and slightly flattened base. Analogies exist at the Ādichanallur urn-fields in the Tinnevely District—Rea, op. cit., pl. VIII, 4.
- M4. Shallow dish of black-and-red ware characterized by a slightly everted and sharpened rim and rounded base.
- M4a. Variant of M4 characterized by a bluntly carinated profile and a flat base.
- M4b. Variant of M4 distinguished by smaller size and slightly concave sides. Cf. Brahmagiri Type C17a.
- M5. Shallow bowl of black ware, with sharpened rim and rounded base.
- M6. Fragment of a bowl with a slightly flared and chamfered rim.
- M6a. Variant of M6 distinguished, without the chamfered rim.
- M7. A rim fragment of a bowl of polished black-and-red ware with a median ledge. It corresponds to Brahmagiri Type C7.
- M8. A rare type of shallow carinated dish of black-and-red ware with a low girth and omphalos-base.
- M9. Fragment of a sharply carinated dish of black-and-red ware with an out-turned rim and a rounded base.
- M9a. Variant of M9.
- M9b. Variant of M9.
- M10. Fragment of bowl of black-and-red ware with out-turned rim.
- M11. Fragment of a shallow dish of black-and-red ware with grooved shoulder and in-turned rim.
- M11a. Variant of M11.
- M12. Basin of black-and-red ware with heavy grooved rim and flattened base. Akin to Brahmagiri Types C19, P19 and P19a.
- M13. Globular vase of black-and-red ware with rounded base. It is characterized by a double row of incised oblique slashes forming a herring-bone pattern round the body, and two prominent grooves on the shoulder.
- M14. Short-necked, weakly carinated vase of reddish ware with red slip, heavy beaded rim, globular body and rounded base. Round the shoulder is a line of finger-nail impressions.
- M15. Globular vase of dull red-and-black ware with an under-cut everted rim and rounded base.
- M16. Vase of polished black ware with weakly cordoned shoulder and flat base.
- M17. A fragment of a flat rimmed vase of polished black ware.
- M18. Fragment of a squat miniature vase of black and red ware.
- M19. Rim of polished black ware, horizontally grooved.
- M20. Rim of polished black ware, with cordon at the shoulder.
- M21. Fragment of a polished black ware dish with an internally grooved rim. It was recovered from level 13, immediately above the preceding sherds.
- M22. Fragment of a large jar of buff ware with bright red slip. It was probably hand-made. Round the neck is a band of finger-nail indentations, and round the shoulder is a frieze of incised triangles, alternately spotted, between bands of herring-bone incisions.

### *Chandravalli 'Āndhra' pottery*

It has been noted above that pottery of the yellow-painted fabric which we have named 'Āndhra ware' occurs in and above the lowest layer but one (layer 13N) of the cutting Ch. 43 (fig. 42). With it from the outset were fragments of the 'beaked' dishes (cf. fig. 47, A10-13) of the type associated with the rouletted pattern of Arikamedu, where this pattern was first identified in conjunction with imported Arretine ware of the second quarter of the first century A.D.<sup>1</sup> Sherds actually bearing the rouletted pattern were found in layers 10 and 9 of Ch. 43, and other fragments of the beaked dishes continued upwards to layer 3; i.e. this type of dish, with or without rouletting, was throughout coincident with the painted 'Āndhra ware'. Some of the sherds (eight in all), occurring sporadically from the 10th up to the 5th layers, bore concentric smoothed bands on the inner side of the base in place of rouletting (pl. CXXIII), and may be regarded as derivative.

<sup>1</sup> *Ancient India*, no. 2 (1946), pp. 45ff. Also below, p. 308.



The upper layers in this sequence produced Sātavāhana coins to which a date in the latter part of the second century A.D. is ascribed (below, p. 287). It is a fair inference, therefore, that the 'Āndhra' pottery of Ch. 43 ranges in period from the middle of the first century A.D. to the end of the second or beginning of the third century. The two uppermost layers of the cutting contained mixed sherds which probably represent various periods extending down to the middle ages or later.

The characteristic painted 'Āndhra' fabric, as at Brahmagiri, is decorated with simple rectilinear designs executed in a lime or kaolin paste under a thin ochreous wash, often with apparent evidence of salt-glazing.<sup>1</sup> The commonest types are straight-sided bowls and 'beaked' dishes. The former was seemingly adopted from the preceding Megalith ceramic (cf. fig. 43, M1-M2); the latter is new and, in view of its special association with the rouletted pattern, may possibly be itself an importation. The painted designs (pls. CXXIV and CXXV and fig. 45) include criss-cross or trellis, radiating lines terminating in pellets, dotted lines, lines with frond-like branches, and occasionally hatched triangles. Of these, vertical or criss-cross lines are the most abundant. On larger vessels, lines of notched or herring-bone pattern, or applied bands of finger-tip pattern, are sometimes added.

For the classification of the pottery, the Āndhra layers of Ch. 43 are grouped as follows (cf. fig. 42):—

*Early Āndhra level*—layers 13N-11. The preceding Megalith culture continues through these layers alongside the yellow painted ware. From layer 13 upwards the latter is dominant.

*Middle Āndhra level*—layers 10-7. In these strata the Āndhra painted fabric occurs very abundantly.

*Late Āndhra level*—layers 6-1. The painted Āndhra wares gradually diminish upwards.

#### Pl. CXXIII

Nos. 1-3 illustrate the rouletted sherds recovered from the main site (Ch. 43) at Chandravalli. No. 1 is from layer 9, the other two from layer 10. A fourth rouletted sherd (not illustrated) was found in layer 3 of another cutting (Ch. 45), which was almost wholly disturbed by pits and was not stratigraphically reliable. Sherds 4-11 belong to a related type of pottery which, in place of rouletted decoration, bears smoothed concentric bands on the inside of the base. The range of these sherds is between layers 10 and 5 of fig. 42.

1. Sherd with rouletted decoration; from layer 9.
- 2-3. Sherds with rouletted decoration; from layer 10.
4. Sherd with two concentric bands; from layer 10.
5. Sherd with two bands; from layer 9.
6. Sherd with a single band; from a pit cut into layer 5.
7. Sherd with a single band; from the same level as no. 9.
8. Sherd with two bands; from layer 8.
9. Sherd with one band; from layer 7.
10. Sherd with two bands; from the same layer as no. 8.
11. Sherd with four bands; from layer 5.

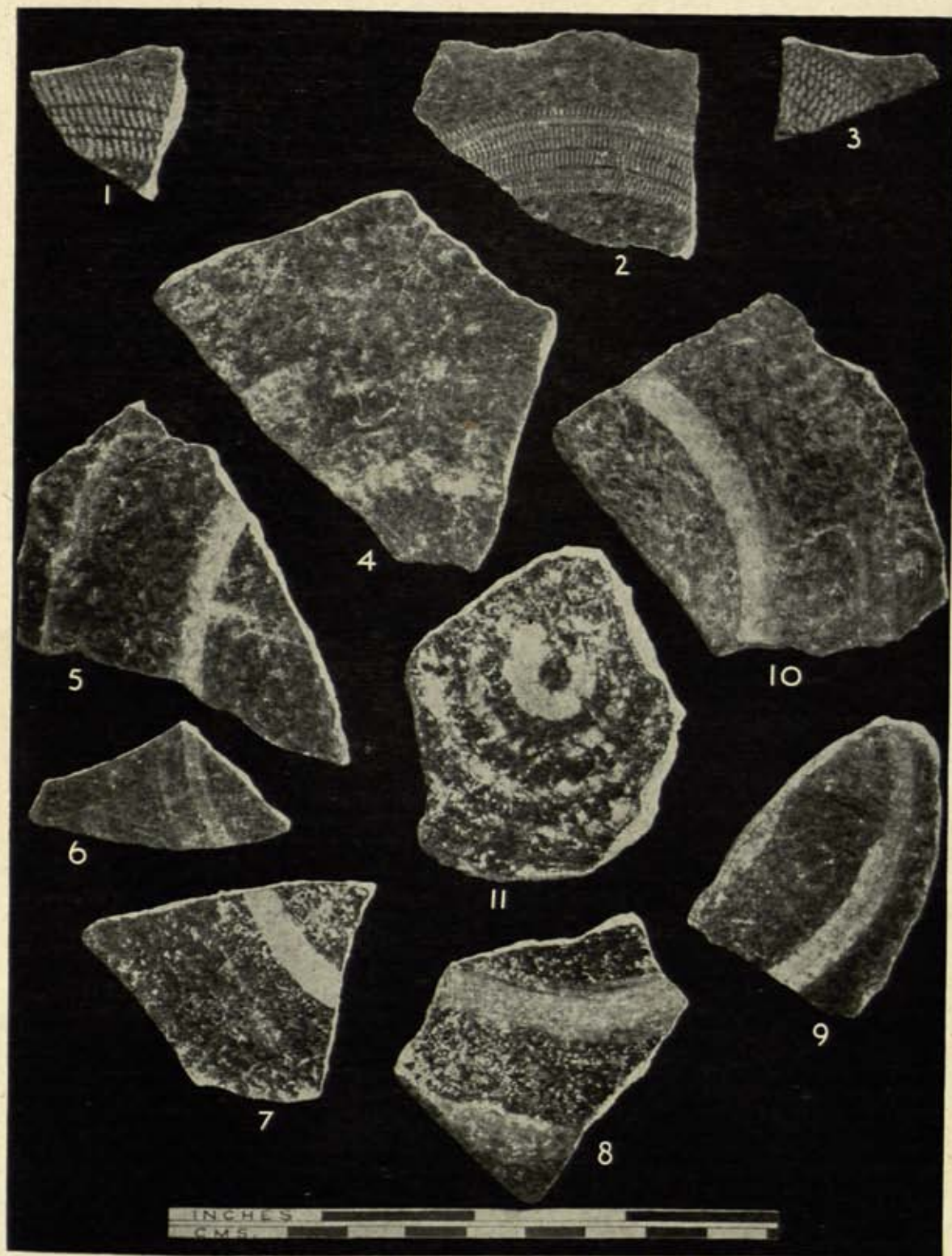
#### Pls. CXXIV-V

The following series illustrates the range of painted designs on the 'Āndhra' ware of Chandravalli (Ch. 43).

1. Sherd of type A3 (fig. 45), painted with criss-cross pattern; from a middle Āndhra level (10).
2. Sherd of type A6 (fig. 45), painted with a different variety of criss-cross; from a late Āndhra level (3).
3. Sherd of type A1 (fig. 45), painted with oblique bands; from an early Āndhra level (11).

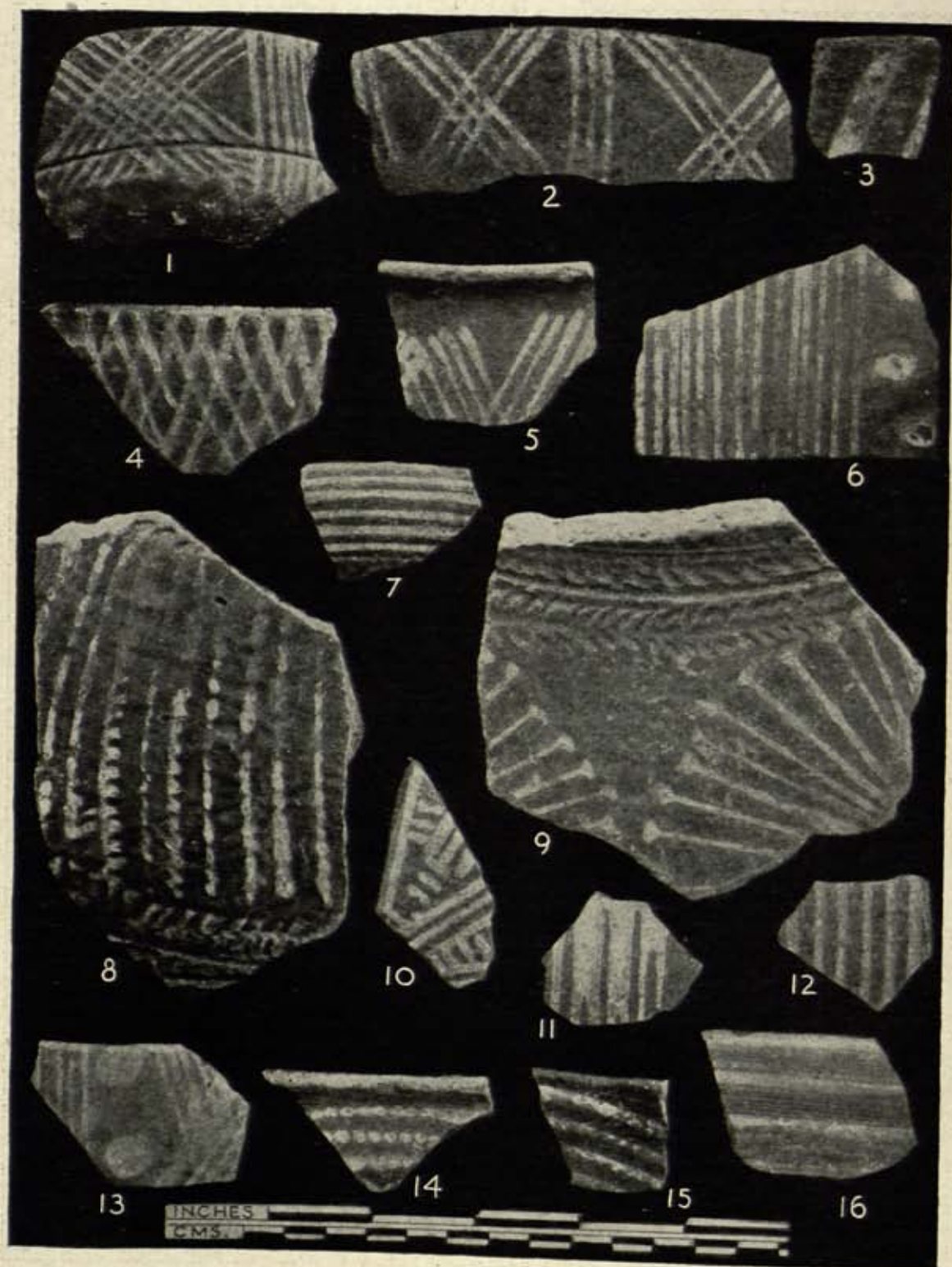
<sup>1</sup> Chemist's notes.





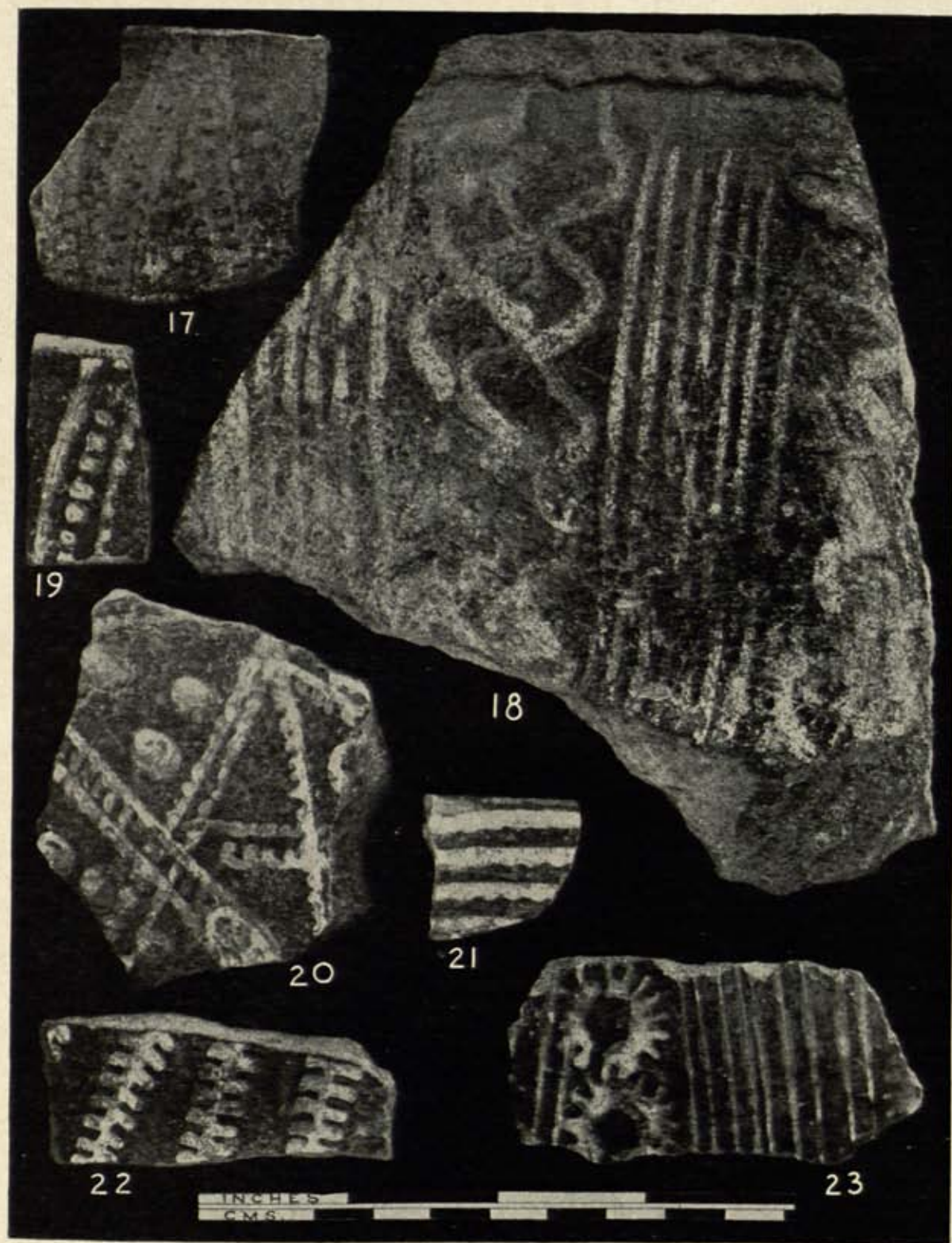
*Chandravalli: 1-3, rouletted ware; 4-11, pottery with smoothed concentric bands*





Chandravalli: painted 'Andhra' pottery





Chandravalli: painted 'Āndhra' pottery





A. *Modern Nāga shrine, Brahmagiri. (See p. 302.)*



B. *Chandravalli: denarius of Tiberius. 1/2. (See p. 287.)*



4. Sherd of the type analogous to the preceding, painted with lattice pattern; from a middle Āndhra level (8).
5. Sherd of type A4 (fig. 45), painted with criss-cross strokes with pellet ends; from a middle Āndhra level (7).
6. Sherd painted with a group of vertical strokes with bosses; from a middle Āndhra level (10).
7. Rim of type A7 (fig. 45), painted with horizontal lines; from a middle Āndhra level (8).
8. Sherd painted with vertical lines relieved by dots; from the same level as nos. 1 and 6.
9. Sherd painted with radiating lines terminating in pellets; from a middle Āndhra level (7).
10. Sherd painted with occasional hatches; from a middle Āndhra level (9).
11. Sherd painted with vertical bands with bifurcated ends; from a middle Āndhra level (8).
12. Sherd painted with roughly vertical lines; from the same level as no. 8.
13. Rim of type A1 (fig. 45), painted with criss-cross pattern inter-spaced with bosses.
14. Rim of type A5 (fig. 45), painted with horizontal rows of dots; from an early Āndhra level (11).
15. Rim of type A6 (fig. 45), painted with slanting rows of dots; from the same level as the preceding.
16. Rim of type A9 (fig. 45), painted with grouped horizontal lines; from the same layer as no. 12.
17. Sherd painted with ladder pattern from a middle Āndhra level (9).
18. Sherd painted with grouped vertical enclosing wavy lines; from a middle Āndhra level (7).
19. Rim of type A1 (fig. 45), painted with slanting lines enclosing dots; from an early Āndhra level (13).
20. Sherd painted with zigzags and bosses; from the same level as the preceding.

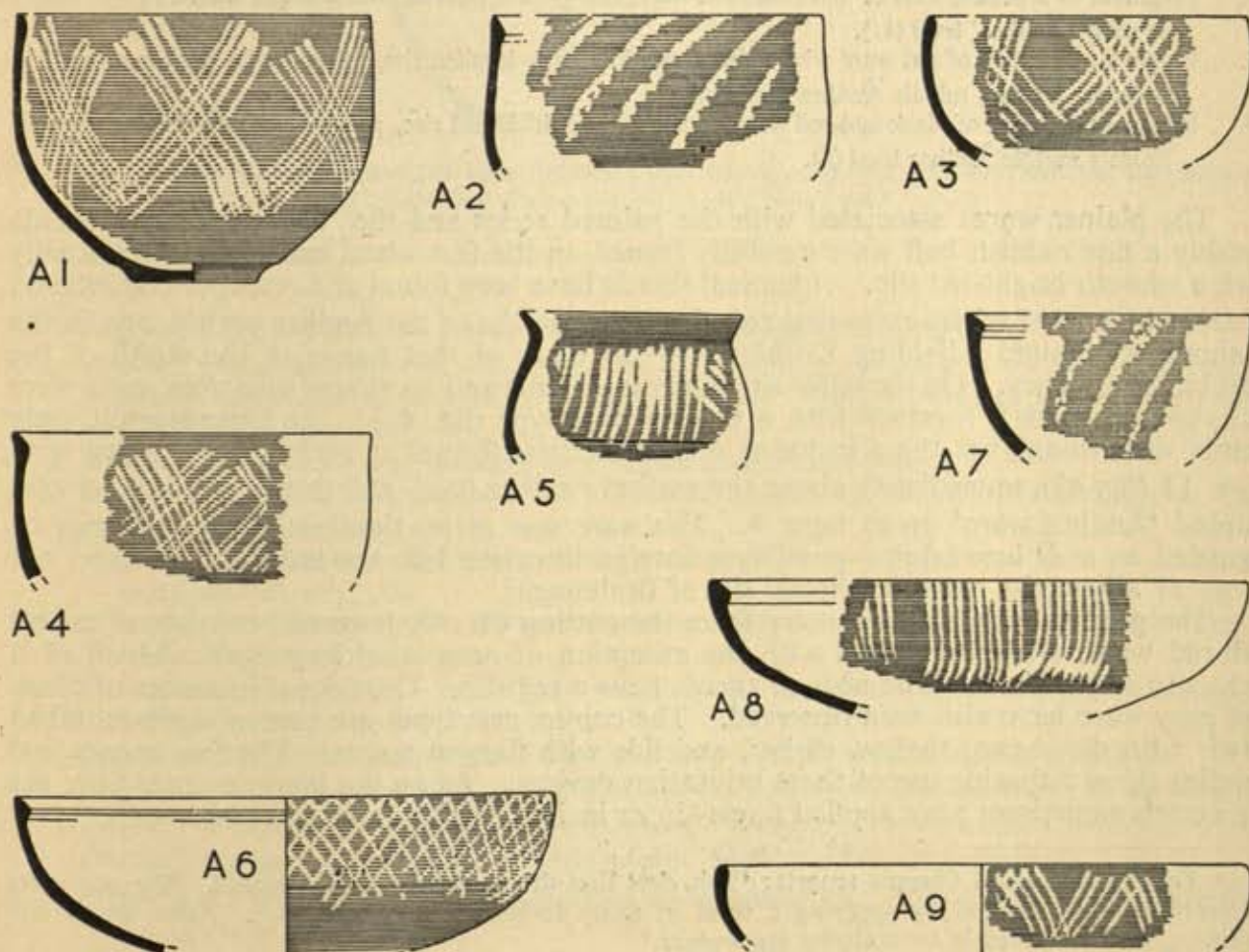


FIG. 45. Chandravalli: painted 'Āndhra' pottery.  $\frac{1}{2}$



21. Rim of type A8 (fig. 45), painted with horizontal bands of comb pattern; from a middle Āndhra level (10).
22. Sherd painted with frond-like pattern; from the same level as preceding.
23. Sherd painted with group of vertical lines enclosing stars, from the same level as the preceding.

Fig. 45

The following are additional typical examples of yellow-painted Āndhra ware from the cutting:

- A1. Straight-sided bowl of black-and-red ware with a disc-base, painted with criss-cross pattern. From the earliest 'Āndhra' level (13N).
- A2. Fragment of a straight-sided bowl of black-and-red ware with a sharpened rim, painted with slanting rows of dotted lines. From the same level as the preceding.
- A3. Fragment of a red-ware bowl, salt-glazed with a slightly convex profile, painted with criss-cross pattern. From a middle 'Āndhra' level (9).
- A4. Fragment of a bowl of black-and-red ware, salt-glazed, with an everted rim, painted with criss-cross pattern. From the same level as the preceding.
- A5. Fragment of a bowl of black-and-red ware, salt-glazed, with a flaring rim, and painted with roughly vertical and oblique strokes. From the same level as the preceding.
- A6. Fragment of a bluntly beaked dish of black-and-red ware, with median groove and painted lattice pattern. From a middle level (8).
- A7. Fragment of a beaked dish of black-and-red ware, salt-glazed, painted with oblique waved rows. From an early 'Āndhra' level (11).
- A8. Fragment of a dish of red ware with a faced and internally levelled rim, painted with groups of upright strokes. From a middle Āndhra level (10).
- A9. Fragment of a dish of black-and-red ware with a slightly thickened rim, painted with grouped chevrons. From a middle Āndhra level (8).

The plainer wares associated with the painted series and the 'beaked' dishes include notably a fine reddish buff ware carefully turned on the fast wheel and covered externally with a smooth bright-red slip.<sup>1</sup> Identical sherds have been found at Konḍāpur (Hyderabad State), where most of the excavated remains appear to be of the Āndhra period, and in the Brahmapuri mound adjoining Kolhāpur in the State of that name, in the south of the Bombay Presidency. On the latter site many fragments and an almost complete vessel were recovered in 1944-5, together with a bronze prototype (fig. 46).<sup>2</sup> At Chandravalli, only sherds were found, but these included a characteristic funnel or neck. They began with layer 13 (fig. 42), immediately above the earliest Āndhra level, and thence ran parallel with painted 'Āndhra ware' up to layer 4. The ware was at no time abundant, and may be regarded as a *de luxe* fabric—possibly a foreign intrusion into the industry. It does not occur at all on the more provincial site of Brahmagiri.

The greater mass of the pottery from the cutting Ch. 43, however, consists of coarse dull-red ware, all wheel-turned with the exception of occasional large jars. Much of it lacks slip or polish, but a number of sherds have a red slip. Occasional instances of black and grey ware have also been observed. The commonest types are conical open-mouthed bowls with disc-bases, shallow dishes, and lids with flanged waists. The few spouts and handles show a sparing use of these utilitarian devices. As on the larger painted jars, the big vessels sometimes have applied finger-tip or incised herring-bone pattern.

<sup>1</sup> The Archaeological Chemist reports: 'It is clear that the potsherds are not glazed. The pots were evidently carefully finished by applying a wash of finely levigated ferruginous clay. After drying and polishing, they were fired in an oxidizing atmosphere.'

<sup>2</sup> Now in the Kolhāpur Museum, with Graeco-Roman objects from the same site.



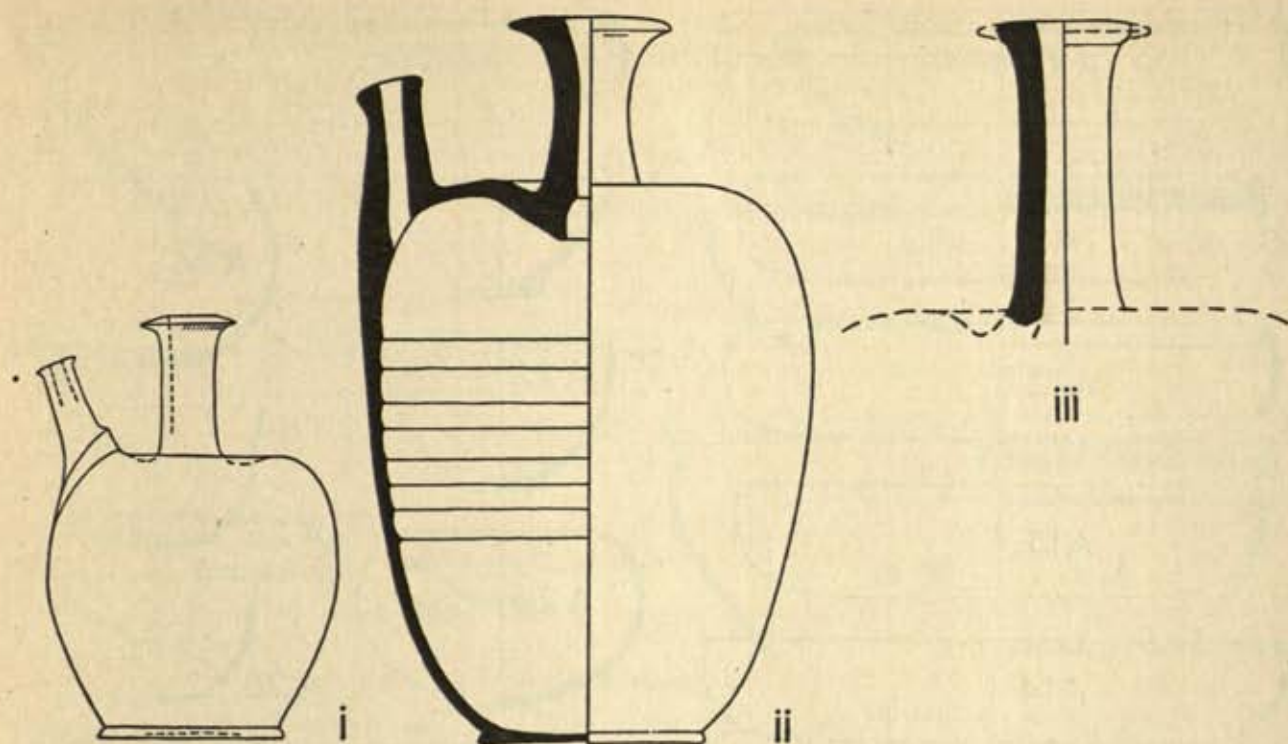


FIG. 46. Polished red-ware vessel (ii) from Kolhāpur, with bronze prototype (i) from same site, and fragment of similar red-ware vessel (iii) from Chandravalli.  $\frac{1}{2}$

Figs. 47-49

- The following pots and potsherds represent the range of unpainted types in Ch. 43.
- A10. Rim of a beaked dish, from an early 'Āndhra' level (13), identical in fabric to the typical 'Arikamedu' dishes to which rouletted decoration is sometimes applied.<sup>1</sup> The type with many of its variants is fairly common at Chandravalli.
- A11. Similar to 1, but with an unpronounced beak. From a late Āndhra level (3).
- A12. Fragment of a dish of black-and-red ware with a bluntly beaked rim. It is also represented in red ware. From a middle Āndhra level (10).
- A13. Fragment of a black-ware dish, distinguished by a markedly inward projection of the rim. From the earliest Āndhra level (13N).
- A14. Fragment of a dish of brownish black polished ware with incurved sides and flattened rim. From a late Āndhra level (3).
- A15. Dish of black-and-red ware with a slightly thickened rim; from a late Āndhra level (5). Variant 6a is of thinner section; from level 6.
- A16. Dish of reddish polished ware with internally clubbed rim. From a middle Āndhra level (10).
- A17. Fragment of a beaked dish of black-and-red ware with carinated profile. From a middle Āndhra level (9).
- A18. Fragment of a dish of black-and-red ware with internally levelled rim. From a middle Āndhra level (7A).
- A19. Fragment of a black ware dish with a chamfered rim. From a middle Āndhra level (8).
- A20. Fragment of a dish of black-and-red ware with a bluntly beaked rim. From a middle Āndhra level (8).

<sup>1</sup> *Ancient India*, no. 2 (1946), p. 45.



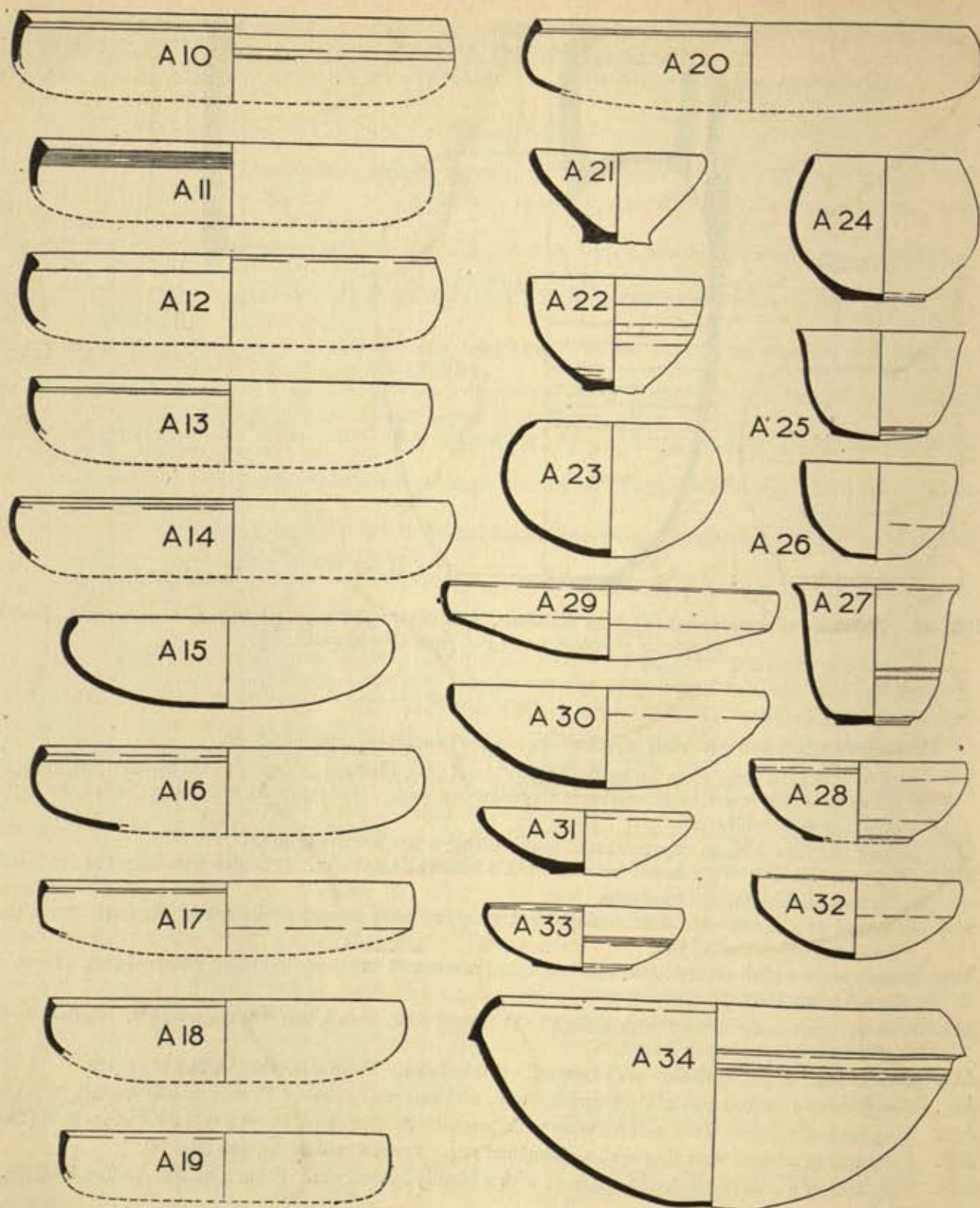


FIG. 47. Chandravalli: 'Āndhra' pottery.  $\frac{1}{4}$



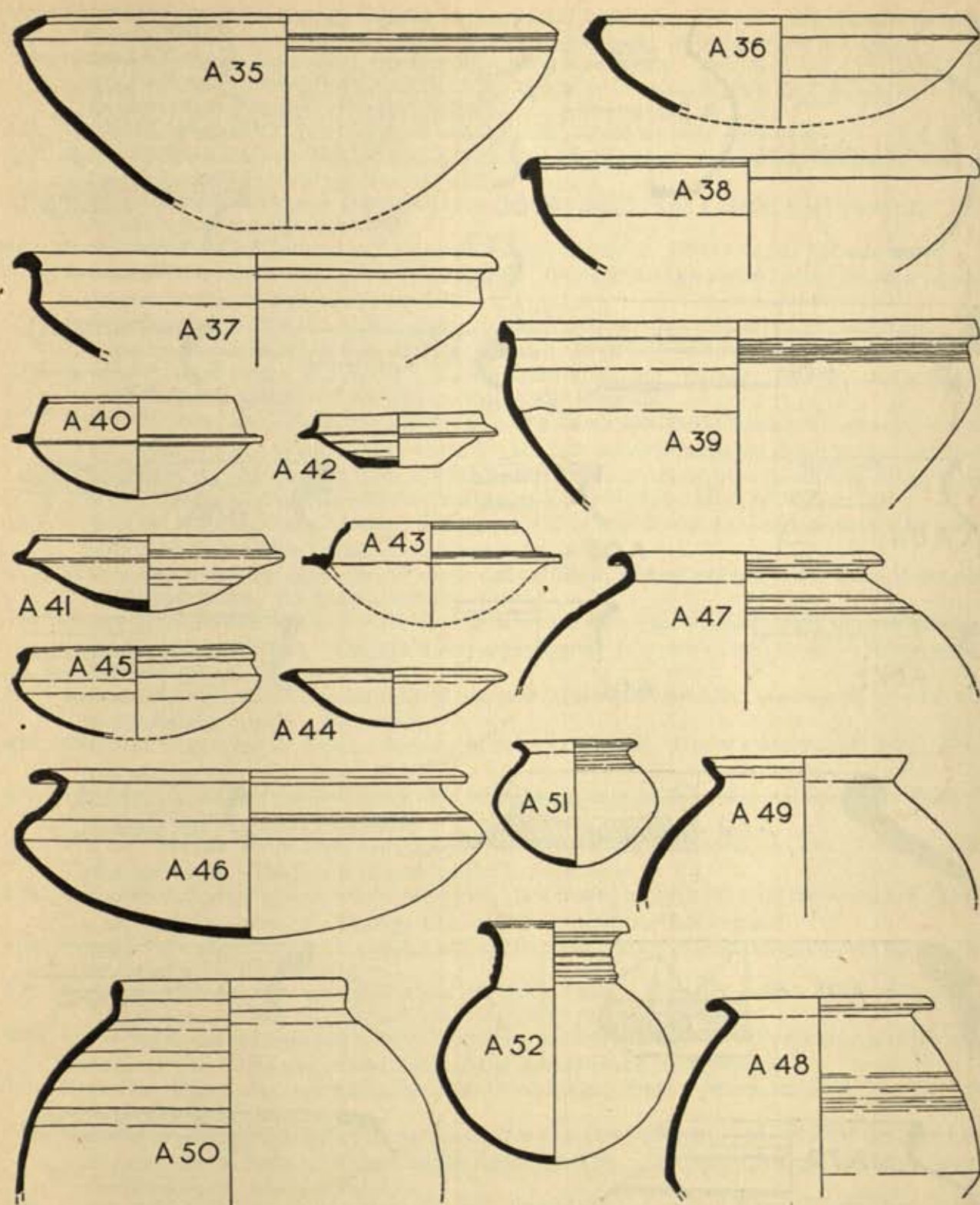


FIG. 48. Chandravalli: 'Andhra' pottery.  $\frac{1}{4}$



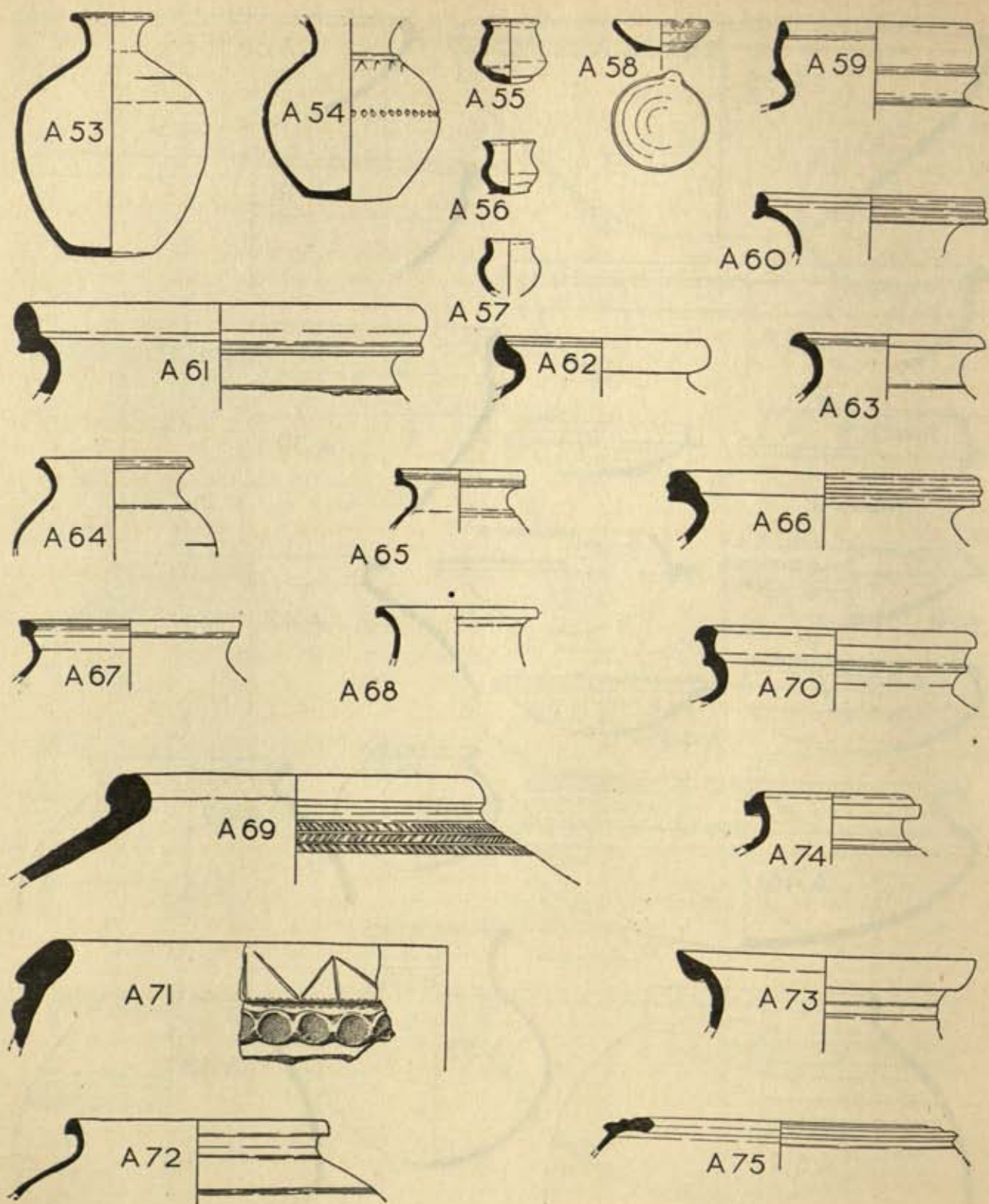


FIG. 49. Chandravalli: 'Āndhra' pottery.  $\frac{1}{4}$



- A21. Wide-mouthed bowl with sides tapering to a restricted disc-base. It is of a coarse dull-red fabric, devoid of slip, and is occasionally represented also in grey ware. It is the commonest type at the site but is found more abundantly in the upper than in the lower strata. The type is indeed widespread and long-lived, and is scarcely distinguishable from modern vessels used in India for food and drink; they are normally thrown away after a single usage.
- A22. Similar to the preceding but with a more convex profile. From a middle Āndhra level (7).
- A23. Bowl of dull reddish ware with a bulbous profile and a round base. From a middle Āndhra level (7). Only one example of this type was recovered.
- A24. Bowl of black-and-red ware with incurved sides and a flat base. From a middle Āndhra level (6). Only one example of this type was found.
- A25. Straight-sided bowl of polished buff ware with a saggar ring-base. From a middle Āndhra level (9).
- A26. Bowl of polished black ware with a flattened base. Only two examples were found. From a pit contemporary with a middle Āndhra level (7).
- A27. Deep beaker with everted rim, ring-base and horizontal grooves. It is of a coarse dull red fabric. The only example was recovered from a middle Āndhra level (7).
- A28. Bowl of polished ware with a red slip, internally beaded rim, and ring-base. From a middle Āndhra level (7). Some examples of this type are slipped only internally.
- A29. Shallow carinated dish with rounded base. It is of a comparatively fine fabric and has a red slip on both sides. From a middle Āndhra level (9). The type occurs occasionally also in coarse grey ware. It is one of the most popular types at Chandravalli and occurs throughout the Āndhra strata, except in the earliest. Comparable with Arikamedu type 8 (*Ancient India*, no. 2, p. 54).
- A30. Dish of red ware with rounded base. The type is usually treated with a red slip on both sides and is fairly common in all the Āndhra strata except in the earliest.
- A31. Shallow dish with a disc base. It is of coarse dull-red fabric, without any slip, and is found abundantly in the upper strata. Comparable with no. 21 above.
- A32. Bluntly carinated dish with a rounded base. It is treated with a red slip both inside and out. From a middle Āndhra level (10). The type is not very frequent. It is akin to the Chandravalli 'megalithic' dish M4.
- A33. Dish of black ware with a slightly thickened rim, grooved sides and disc-base. From a pit equated with middle Āndhra level (7). A rare type.
- A34. Carinated basin of red ware with a flanged rim and a round base. It is of a coarse gritty ware. From a pit equated with Āndhra level (5).
- A35. Fragment of a basin of polished brown ware, with sharply incurved rim and grooves round the shoulder. From the earliest Āndhra level (13N).
- A36. Fragment of a basin with heavy incurved rim. It has a red slip both inside and out. From a middle Āndhra level (8). The type is represented also in black ware.
- A37. Fragment of a carinated basin with a heavy rim. It is treated with red slip both inside and out. From a middle Āndhra level (9). The type also occurs in a bluntly carinated variant.
- A38. Fragment of a simple basin with a beaded and undercut rim. It has red slip both inside and out. From the same level as the preceding.
- A39. Fragment of a basin with an undercut rim and grooved neck. From the earliest Āndhra level (13N). The type seems to have been derived from a megalithic prototype (cf. M12).
- A40. Lid of coarse, dull-red ware with a flange at the waist and a rounded base. It represents one of the most abundant types of the site. From a pit in a late Āndhra level (cut into layer 5).
- A41. Similar lid of grey ware, but with a less pronounced flange. From a pit cut into level (7). The type occurs also in dull-red ware.
- A42. Red-ware lid distinguished by a flattened base. It is of a finer buff fabric, and has a red slip above the flange and on the interior. From a middle Āndhra level (8). The type, with slight variations, occurs also in coarse and unslipped red ware.
- A43. Fragment of a small dish or lid with an externally grooved rim and a ridged flange. From a late Āndhra level (5).



- A44. Shallow dish-like lid of black ware with a flattened and internally grooved rim and a round base. From a late Āndhra level (6).
- A45. Carinated vase of grey ware with a beaded rim and a round base. From a pit cut into Āndhra level (5). The type may have been used partly as a lid.
- A46. Carinated vessel of reddish ware with flanged rim, weakly cordoned shoulder and round base. From a pit in a late Āndhra level (cut into layer 7). The type is represented both in red and grey ware and is found in almost all the Āndhra strata, except in the earliest. Similar vessels have also been recovered from Arikamedu (cf. Arikamedu type 24).
- A47. Fragment of a vase of slipped red ware with an undercut rim, characterized by a groove on the top, and a corrugated shoulder. From a late Āndhra level (5).
- A48. Fragment of a grey ware carinated vase with a flanged rim and a series of grooves round the shoulder. From a middle Āndhra level (7).
- A49. Fragment of a red ware vase with a flaring rim, internally grooved to receive a lid. It is treated externally with a red slip. From the earliest Āndhra level (13N).
- A50. Fragment of a vase of reddish black ware with a short straight neck and a horizontal rim; treated externally with a red slip. From an early Āndhra level (13).
- A51. Small vessel of grey ware with grooved shoulder. From a middle Āndhra level (7).
- A52. Vase of dark red ware, possibly salt-glazed, with high ridged neck and round base. From the same level as the preceding.
- A53. Bottle-shaped vessel with imperfectly flattened base. It is treated with a sepia brown slip and is possibly salt-glazed. From the same level as the preceding. It is an exceptional type and is probably derived from a metal prototype.
- A54. Vase of slipped red ware with a globular body and a flat base. It is ornamented with a row of indentations round the body and notches round the shoulder. From a pit cut into layer (7).
- A55. Miniature vase of grey ware with low girth and rounded base. From a middle Āndhra level (7).
- A56. Miniature vase of the type analogous to the preceding, but with a flat base. From the same level as the preceding. The type occurs also in red ware.
- A57. Fragment of a rough miniature vase. From a late Āndhra level (5).
- A58. Lamp of coarse dull-red ware with a lip and a flat base. Such clay lamps are widely used today in India. From the same level as nos. 46-47.
- A59. Fragment of a vessel of slipped red ware with a cordon below the rim. From a middle Āndhra level (9). Variants of this type occur also in black ware.
- A60. Fragment of a vessel of coarse reddish ware, black inside and on the rim, which is flanged and grooved. From a middle Āndhra level (8).
- A61. Fragment of slipped red ware grooved rim. From a middle Āndhra level (10). A diminutive form of this type occurs also in grey ware. The type is fairly common and occurs throughout the Āndhra strata, except in the earliest. In one instance the cordon is decorated in a notched pattern.
- A62. Fragment of a vessel of slipped red ware with rim rebated to receive a lid. From a middle Āndhra level (8).
- A63. Fragment of a vessel of slipped red ware with internally grooved rim. From the same level as the preceding.
- A64. Rim of a vase of slipped red ware. From a late Āndhra level (5).
- A65. Rim of coarse reddish ware internally ledged to receive a lid. From the same level as nos. 51-53.
- A66. Grooved rim of slipped red ware. It is of a coarse gritty fabric. From a middle Āndhra level (10).
- A67. Grooved rim of grey ware. From the same level as the preceding.
- A68. Rim of black-slipped buff ware. From an early Āndhra level (11).
- A69. Fragment of a heavy roll-rimmed vessel of slipped red ware, decorated with incised herring-bone pattern. From a late Āndhra level (5).
- A70. Fragment of a vase of slipped red ware with a recurved rim. From a middle Āndhra level (10).



- A71. Rim of coarse red ware with an applied band of finger-tip pattern on the neck and incised zigzags on the rim. From a late Āndhra level (5). The applied finger-tip pattern is a common feature of middle and late Āndhra layers.
- A72. Fragment of slipped red ware with an undercut rim, and cordon round the neck. From a late Āndhra level (4).
- A73. Rim of slipped red ware. From a lower Āndhra level (13).
- A74. Grooved rim of red ware. From a late Āndhra level (4).
- A75. Grooved oblique rim of grey ware. From a middle Āndhra level (7). The type is represented both in plain red and grey ware.

### (iii) THE CHANDRAVALLI COINS (1947)

Of the coins found on the main site (Ch. 43) at Chandravalli in 1947, the most definitely datable is a denarius of the Roman emperor Tiberius of late Livia-Pax type, minted c. A.D. 26-37 and lost when in fairly good condition (pl. CXXVI B). Unfortunately, its evidential value is vague. It was found in layer 5 (fig. 42), and the same layer yielded a potin coin of Yajña Śātakarṇi whose date is uncertain but may have been late in the second century A.D. (see below). Another potin coin of the latter ruler occurred at a slightly lower level, in layer 6. Otherwise no dated and clearly stratified coin was discovered, although one of Vāsishṭhiputra Śrī-Puṣṭmāvi, who is fairly well dated to c. A.D. 131-155 (below, p. 291), was found high up (in the second layer from the top) in another cutting (Ch. 45), where the stratification was less reliable and cannot in any case be correlated with that of the main site.

If the inferential dating of Yajña Śātakarṇi be accepted, it is evident that the Roman denarius was not lost before the latter half of the second century A.D., considerably more than a century after it was minted. This conclusion is by no means unlikely. There is evidence, which I shall discuss elsewhere, that the aurei and denarii of the Roman principate were introduced into India not as an imposed currency but as bullion of a quality and weight guaranteed by the imperial stamp. They were used in bulk and have in fact, in a large majority of cases, come down to us as hoards. In that capacity they passed from hand to hand, with additions and subtractions, sometimes for a long period, if indeed some of them did not already include outmoded coins from the start. An interesting light is thrown on this matter by a hoard of Roman gold and silver coins found with native square punch-marked silver coins in a pot at Eyyal, 22 miles north-west of Trichur in Cochin State, in 1945. The Roman coins in this hoard mainly represent Augustus, Tiberius, Claudius and Nero, but end with an aureus of the second consulate of Trajan (A.D. 98-9), over a century later than the mint-date of the earliest coin.

It is probable that the six scattered Roman denarii found at Chandravalli in a fairly compact area during a series of excavations extending from 1909 to 1947 represent a *quondam* hoard, dissolved anciently and used locally as a high-value currency alongside the local potin coinage, at a time when this Roman bullion-trade had ceased or in a place to which it had not penetrated. The bullion-trade reached its maximum on the basis of the coinage of Tiberius (A.D. 14-37) and, with rare survivals of which one has just been mentioned, came to an end in the third quarter of the first century A.D. The use of the *dissecta membra* of these first-century hoards at times or in regions remote from those of the maritime trade which introduced them is a likely enough sequel.

We may therefore have no special compunction in regarding the denarius as an intruder into our stratification, and may provisionally ascribe strata 5 and 6 of Ch. 43 to the latter half of the second century A.D. This is consistent with the discovery, mentioned above,



of a coin of Vāsishthīputra Śrī-Puṣumāvi in the penultimate stratum of cutting Ch. 45, and with a date somewhat after A.D. 200 for the final Āndhra occupation of Chandravalli. This in turn accords with the historical probability that the Āndhra empire was in dissolution by the middle of the third century A.D.<sup>1</sup>

Mr. Krishna Deva, who has prepared the subjoined list of coins, adds the following note on the dating of Yajña Śātakarṇi.

There is no direct evidence for the dating of Yajñaśrī Śātakarṇi. The following data, however, provide indirect evidence on the point.

In the long lists of the Āndhra rulers supplied by the Purāṇas, there is only one ruler named Yajñaśrī, whose relative position in the dynastic lists<sup>2</sup> is shown as follows:—

23. Gautamīputra	.. 21 years.
24. Puṣumā[vi]	.. 28 years.
25. Śivaśrī Śātakarṇi	.. 7 years.
26. Śivaskanda Śātakarṇi	.. 7 years.
27. Yajñaśrī Śātakarṇi	.. 29 years.

Yajñaśrī Śātakarṇi strikes silver coinage in close imitation of the popular Western Kshatrapa type (*obv.* head of king; *rev.* crescent on hill, with the sun and moon symbols) which was started by Chashtana.<sup>3</sup> He is therefore later than Chashtana whose known date is Śaka 52<sup>4</sup> = 130 A.D.

The palaeography of the inscriptions and coins of Yajñaśrī Śātakarṇi shows developed features as compared with those of Vāsishthīputra Puṣumāvi and indicates that he flourished later than Puṣumāvi, who has been reasonably dated to c. A.D. 131–155 (see below, p. 291). The developed features comprise the use of the looped variety of *t*<sup>5</sup> and the prominent serif<sup>6</sup> over letters.

The substantial accuracy of the dynastic list of the Purāṇas is corroborated as much by the palaeographical evidence cited above, which makes Yajñaśrī posterior to Puṣumāvi, as by the testimony of an inscription of the former, dated in his regnal year 27<sup>7</sup>, which is consistent with the 29 years assigned to him by the Purāṇas. Adding to the last date of Puṣumāvi, viz., c. A.D. 155 (see below, p. 291), the 14 years of the reigns of two intervening kings as supplied by the Purāṇic list, we get c. A.D. 155 + 14 = c. A.D. 169 as the date of accession of Yajñaśrī, and c. A.D. 169 + 27 = c. A.D. 196 as his terminal date, assuming that he reigned only for the 27 years indicated (as a minimum) by the epigraph referred to.

Of a total of fifty-five coins found in the present excavation, only two are of silver (nos. 1-2), of which one is the Roman denarius discussed above and the other is a rectangular punch-marked coin, representing an early Indian currency which, however, continued in circulation until at least the second century A.D.<sup>8</sup> Of the remaining coins, which are all made either of lead or of potin (an alloy of copper, zinc, lead and tin), forty-three are legible and definitely attributable to the Āndhras and their feudatories, while the residue of ten coins, though illegible, may also be assigned to the chiefs or feudatories of the same dynasty on account of their material and associations.

The silver punch-marked coin (no. 2), which came from stratum 7 of the main section, shows a new type with blank reverse and a group of five symbols on the obverse of which

<sup>1</sup> E. J. Rapson, *Brit. Mus. Cat. of Coins of the Āndhra Dynasty* (London, 1908), p. xlv.

<sup>2</sup> *Ibid.*, p. lxvi.

<sup>3</sup> *Ibid.*, pl. X, 259–262.

<sup>4</sup> *Epigraphia Indica*, XVI, pp. 19ff.

<sup>5</sup> *Ibid.*, pl. VI, 139 and 146; *Epigraphia Indica*, VIII, p. 94, pl. I, 24.

<sup>6</sup> Rapson, *op. cit.*, pl. VIII, 165.

<sup>7</sup> *Epigraphia Indica*, I, p. 96.

<sup>8</sup> J. Allan, *Brit. Mus. Cat. of Coins of Ancient India* (London, 1936), pp. xlviii f.



only four (fig. 50, 1-4) can be identified. One of these is the solar symbol, which is the most frequent symbol on the punch-marked currency<sup>1</sup>; another is a floral design,<sup>2</sup> which occurs on the reverse of some punch-marked copper coins; a third symbol, resembling the *damaru* or hour-glass, is known to occur as a reverse mark<sup>3</sup>; while the fourth, which is incompletely preserved, appears to represent the arrow-head.

Of the Āndhra coins, only three, comprising one coin of Puḷumāvi (no. 3) and two of Yajña Śātakarṇi (nos. 4-5), are definitely attributable to the main line; while as many as fifteen (nos. 6-20) belong to Āndhra feudatories. Of the latter, all coins with the exception of two (nos. 19 and 20), come from deep layers ranging from stratum 7 to 10 from the top (fig. 42). This circumstance accords well with the earlier palaeography of these coins, as compared with those of Puḷumāvi and Yajña Śātakarṇi. In fact, on the general grounds of palaeography alone, these coins, though not specifically datable, are assignable to a pre-Puḷumāvi period, though not in any case, it seems, earlier than c. 50 B.C.<sup>4</sup> The most numerous and the best preserved of these are the issues of Sadakaṇa Kaḷālāya Mahārāṭhi, who is represented by nine coins (nos. 6-14) of a known variety and one coin (no. 15) of an unknown variety with a new reverse type, showing a hitherto unpublished symbol, which, on the analogy of a design occurring on roughly contemporary sculptures,<sup>5</sup> may be identified as the 'double-fish' symbol. More interesting than these are coins, nos. 16-18, yielding the names of two chiefs, hitherto unknown, who may have belonged to the same family as Sadakaṇa Kaḷālāya Mahārāṭhi, since they use a common coin-type and designation. The legend on nos. 16-17 is *Sadakaṇa Chaṭa-Kanha Maharāṭhisa* and on no. 18 *Sadakaṇa Kaṇasa Maharāṭhi-putasa*, the last being a coin of a 'son of Mahārāṭhi' or of a prince, acting perhaps as a lieutenant of the Mahārāṭhi. Coin no. 19 showing the bull reversed appears to belong to an anonymous and probably later Mahārāṭhi chief, as this coin was found in a higher stratum (layer 6) than those just discussed. Similarly, the Chuṭu Kaḷānanda of coin no. 20 (which was found in a pit also corresponding to layer 6) may be a successor of the Mahārāṭhis, since the designation *Mahārāṭhi* is absent from his coin-legend, which also shows a later palaeographical feature in the use of exaggerated serifs.

A special interest attaches to coin no. 21, which shows a new type. Unfortunately the major part of its legend has missed the flan. Its obverse type of an elephant standing left is similar to that published on certain square coins from Konḍāpur<sup>6</sup> bearing the name of Gautamīputra Śātakarṇi, though the obverse symbol of bow and arrow and the reverse design seem to connect it with the issues of Vāsisthiputra Viḷivāyakura and Māḍhariputra Sivalakura, found in the Kolhāpur District of Mahārāshṭra.<sup>7</sup>

The uninscribed coins (nos. 25-45) have here been classified under Types A-G in accordance with the designs which they bear. Types F and G are connected with the

<sup>1</sup> Allan, op. cit., p. xxii.

<sup>2</sup> Ibid., p. 101, pls. XII-XIII.

<sup>3</sup> Ibid., pp. 26, 27, 48.

<sup>4</sup> The characters of these coins are identical with those of the Sānchi inscription of Śātakarṇi, dated by N. G. Majumdar to c. 50 B.C. See John Marshall, A. Foucher and N. G. Majumdar, *The Monuments of Sānchi* (Govt. of India Press, Calcutta, 1941), I, 275-277.

<sup>5</sup> V. S. Agrawala, *A short Guide-book to the Archaeological Section of the Provincial Museum, Lucknow* (Allahabad, 1940), pls. V-VI.

<sup>6</sup> G. Yazdani, 'Excavations at Kondapur', *Annals of the Bhandarkar Orient. Res. Inst.*, XXII, 180, pl. XV, 16-18.

<sup>7</sup> E. J. Rapson, op. cit., pl. I, 14-15 and pl. II, 17-26.



Mahārāṭhi coins (nos. 6–19) by the humped bull on the obverse and the crescent on a hill or tree within a railing on the reverse. Similarly, Types B, C and D, showing the hill-symbol on one side, connect themselves with Type F, while Type A is related to Type B by the obverse design and to Type C by the reverse design. Thus all the uninscribed types appear to be mutually connected. It is further worth noting that, of a total of seventeen uninscribed coins from the stratified layers, fourteen come from the deeper layers 7–9, which also yielded the majority of the Mahārāṭhi coins. It is, therefore, not unlikely that the uninscribed types, being invariably of a smaller size and weight, were issued by the Mahārāṭhi chiefs as smaller denominations to supplement their larger currency.

## (a) ROMAN DENARIUS

1. (pl. CXXVI B.) *Obv.* Head of Tiberius, laureate, r.

TI CAESAR DIVI AVG F AVGVSTVS

*Rev.* Female figure, draped, seated r. on chair, holding branch in l. hand and long sceptre in r. The woman's feet rest on foot-stool. Legs of chair ornamented. Below chair, single line. (The figure represents Livia as Pax.)

PONTIF MAXIM

r. up, l. down.

Size .7"; wt. 2.89826 gm.

Condition when lost: fairly good.

Cf. H. Mattingly, *Brit. Mus. Cat. of Roman Coins*, I, pp. cxxx and 126, and pl. 23, 4–9. The type dates from the latter part of the principate of Tiberius, c. A.D. 26–37. Ch. 43 B-167, stratum 5.

## (b) SILVER PUNCH-MARKED COIN

2. *Obv.* A group of five symbols of which four (fig. 50, 1–4) can be identified.

*Rev.* Blank.

Rectangular, size .53" × .42"; wt. 2.58632 gm. New type. Condition—fairly worn. Ch. 43 AI-92, stratum 7.

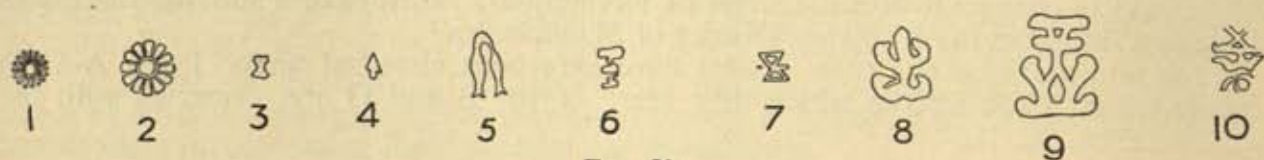


FIG. 50



(c) ĀNDHRA COINS<sup>1</sup>

*Inscribed coins of certain attribution*

(Vāsishthīputra) Śrī-Puṣumāvi (c. A.D. 131–155)<sup>2</sup>

(Same as Rapson, p. 21, pl. V, 90-91, found in Chanda District. Also found on the Āndhra site at Konḍāpur, Hyderabad State<sup>3</sup>; and in a hoard of Sātavāhana coins from Tarhālā, Akola District, Berar.)<sup>4</sup>

3. *Obv.* Indistinct elephant, with trunk upraised, standing r. Inscription: . . . [Puṣu]ma[v] . . . . .  
*Rev.* Ujjain symbol with a pellet in each orb. Size .6"; wt. (fragmentary) 1.610 gm. Condition—corroded and mutilated. Unstratified. Ch. 45 A<sub>2</sub>-163.

/ Śrī-Yajña-Śātakarṇi (c. A.D. 169–196)

(Same as Rapson, p. 42, pl. VII, 165-166, found in Chanda District. Also found on the Āndhra site at Konḍāpur, Hyderabad State; and in a hoard of Sātavāhana coins from Tarhālā, Akola District, Berar.)

4. *Obv.* Indistinct elephant, with trunk upraised, standing r. Inscription: . . . [ña] Sāta[ka] . . . . .  
*Rev.* Ujjain symbol with a pellet in each orb.  
 Size .74"; wt. 3.265 gm. Condition—very corroded. Ch. 43 AI-21, stratum 5.
5. Same as no. 4 but more distinct. Inscription: . . . [Si]r[i] yaña-S[ā]ta . . . . .  
 Size .7"; wt. 2.568 gm. Condition—fair. Ch. 43 AI-38, stratum 6.

*Sadakaṇa Kaṭalāya Mahārāṭhi*

Variety *a*

(Same as Var. *a* of Rapson, p. 57; pl. VIII, 233.)

6. *Obv.* Humped bull standing l. Inscription: *Sadakaṇa Kaṭalāya Mahārāṭhisā*.  
*Rev.* l., tree within railing; r., crescent on hill, consisting of two tiers of small arches and one large arch, with a line (river-symbol) below.  
 Size 1"; wt. 12.826 gm. Condition—good. Ch. 43 AI-140, stratum 7.

<sup>1</sup> These coins are round and made of either lead or potin.

<sup>2</sup> The evidence for dating Vāsishthīputra Puṣumāvi is as follows:—

Gautamīputra Śātakarṇi, father and predecessor of Vāsishthīputra Puṣumāvi, conquered Nahapāna and re struck his coins. As the last recorded date of Nahapāna is Śaka 46 = A.D. 124, the regnal year 18 of Gautamīputra Śātakarṇi (known from his inscription indicating his conquest of Nahapāna) will fall in the year A.D. 124 + X, the value of X being a small or even negligible quantity. His regnal period of 24 years, known from an inscription, will therefore fall between c. A.D. 106 and 130.

On the testimony of inscriptions, Vāsishthīputra Puṣumāvi was a son-in-law of Rudradāman whose Gīrnār epigraph, dated in Śaka 72 = A.D. 150, refers to having 'twice defeated but not slain owing to nearness of relation' the former. This indicates that Puṣumāvi lived beyond A.D. 150.

Ptolemy, who wrote his geography about A.D. 140, mentions as his contemporaries Tiastenes, ruler of Ozene, and Sirtoplemaios, ruler of Baithana, who may be identified respectively as the Western Kshatrapa ruler Chashtana and the Āndhra ruler Puṣumāvi. It may be noted in this connection that Paithana is known in the Jaina tradition as the capital of the Sātavāhanas and was included in the dominion of Puṣumāvi, as is evident from the distribution of his coins and inscriptions.

As Vāsishthīputra Puṣumāvi was the son and successor of Gautamīputra Śātakarṇi (c. A.D. 106–130) and a contemporary of Rudradāman (A.D. 150), and as he is known from an inscription to have reigned for at least 24 years, his date is c. A.D. 131–155.

<sup>3</sup> G. Yazdani, 'Excavations at Kondapur', *Annals Bhand. Orient. Res. Inst.*, XXII, 180; pl. XIV.

<sup>4</sup> V. V. Mirashi, 'A new hoard of Sātavāhana coins from Tarhala (Akola District)', *Journ. Num. Soc. Ind.*, II, 83f.; pl. VIII.



7. Same as no. 6. Inscription: *Sadakanam Kaḷalā[ya Maha]raṭhisa*.  
Size 1"; wt. 8.552 gm.  
Condition—good. Ch. 43 AI-143, stratum 7.
8. Same as no. 6. Inscription: *Sadakaṇa [Ki]lālā[ya] Ma[hāra]ṭh[i]sa*.  
Size 1.1"; wt. 6.615 gm. Condition—pitted and defaced. Ch. 43 B-101, stratum 7.
9. Same as no. 6. Inscription: . . . *dakanam Kaḷalāya Mahāraṭh* . . .  
Size 1.07"; wt. 10.995 gm. Condition—very good. Ch. 43 AI-149, stratum 8.
10. (pl. CXXVII, 10.) Same as no. 6. Inscription: *Sadakaṇa Kaḷalāya Mahāraṭhisa*.  
Size 1.1"; wt. 11.812 gm. Condition—excellent. Ch. 43 BI-68, stratum 7B = 8.
11. Same as no. 6. Inscription: *Sadaka[ṇa] Kīlālāya Mahāraṭhisa*.  
Size 1.1"; wt. 10.197 gm. Condition—good but slightly deformed. Ch. 43 BI-92, stratum 8.
12. (pl. CXXVII, 12.) Same as no. 6. Inscription: *Sadakaṇa Kaḷal[ā]ya Mahāraṭhisa*.  
Size 1.05"; wt. 9.447 gm. Condition—excellent. Ch. 43 BI-93, stratum 8.
13. Same as no. 6 but highly corroded. Inscr. completely defaced.  
Size at least .96"; wt. 4.913 gm. Ch. 43 AI-188, stratum 9.
14. Probably same as no. 6. Inscription: . . . . . [ya] Ma[ha] . . . . .  
Size about 1"; wt. (fragmentary) 2.870 gm. Condition—broken and mutilated with worn-out rev. Ch. 43 BI-100, stratum 10.

Variety *b*

15. (pl. CXXVII, 15.) *Obv.* Same as Var. *a*. Inscr.: *Sadakaṇa Kaḷalāya Mahāraṭhisa*.  
*Rev.* Crescent on hill, consisting of six arches in three tiers, with a wavy line (river-symbol) below; l., triangle-headed standard over the 'double-fish' symbol (fig. 50, 5); r., *nandipada* over the 'double-fish' symbol; below, *svastika* l. and *śrīvatsa*-symbol r.  
Size 1.15"; wt. 16.34816 gm. New variety. Note the double-fish symbol which is analogous to a design occurring on roughly contemporary sculptures from Mathurā.<sup>1</sup> Condition—excellent. Ch. 43 AI-20, stratum 7.

*Sadakana Chuṭu-Kanha Mahārathi*

16. (pl. CXXVII, 16.) *Obv.* Humped bull standing l. Inscr.: *Sadakana [Chaṭa-Ka]ṇhasa Mahāraṭhisa*.  
*Rev.* l., tree within railing; r., crescent on hill of six arches in three tiers; a new symbol (fig. 50, 6) in between.  
Size .9"; wt. 5.741 gm. New type. The new symbol (fig. 50, 6) seems to be an abbreviated triangle-headed standard. Condition—worn but fair. Ch. 43 ZI-69, stratum 7.
17. (pl. CXXVII, 17.) Same as no. 16. Inscr.: *Sadakana [Cha][ṭa\*]-[Ka]ṇhasa [Ma][hara\*]ṭh[i]sa*.  
Size .95"; wt. 7.30945 gm. Condition—worn but fair. Ch. 43 AI-86, stratum 7.

*Sadakaṇa Kana. Mahārathi-puta*

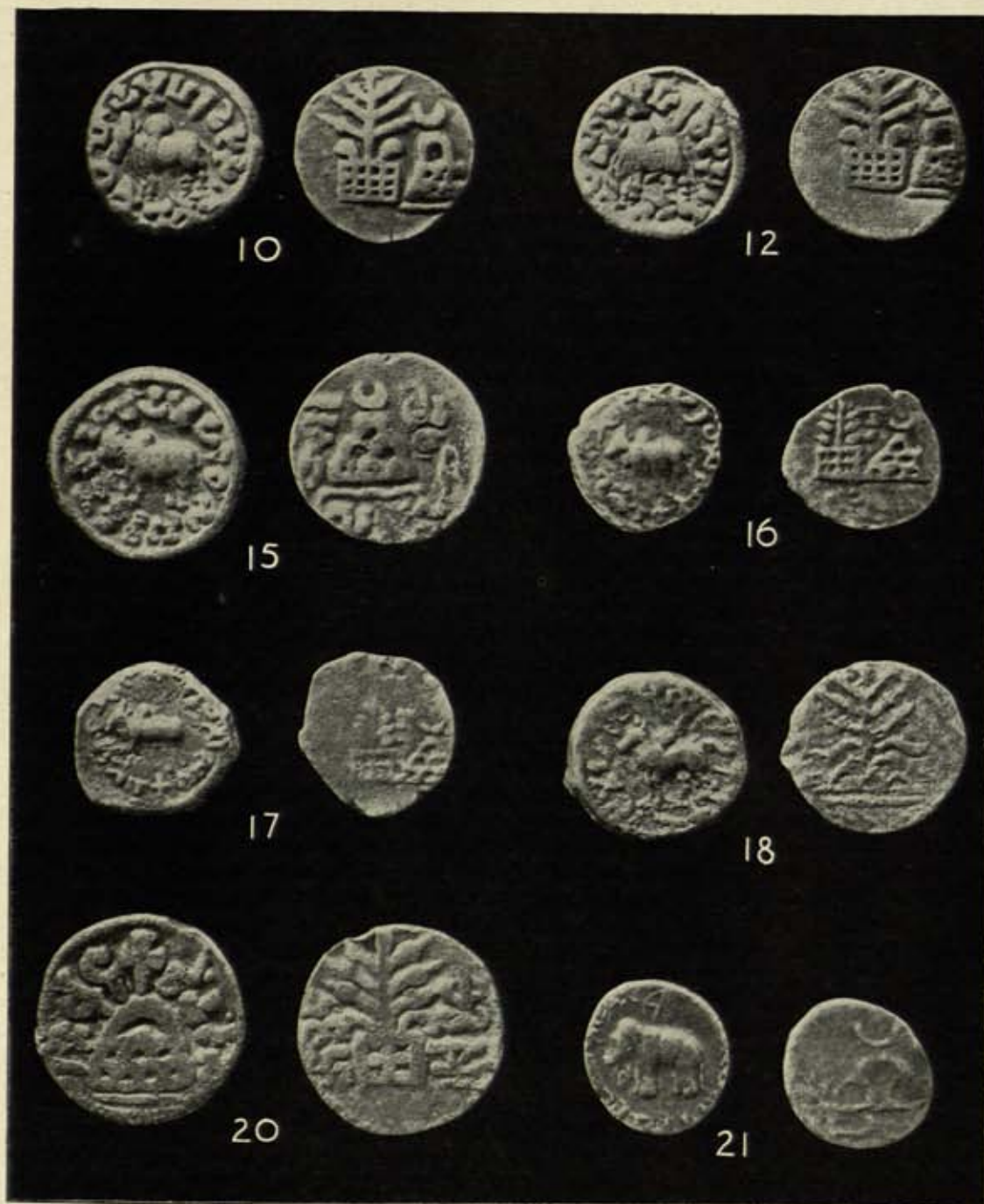
18. (pl. CXXVII, 18.) *Obv.* Humped bull standing l. Inscr.: *Sadakaṇa Kana.sa Mahāraṭh[i]-putasa*.  
*Rev.* Tree on a hill of five arches in two tiers with a line beneath; l., indistinct symbol; r., symbol illustrated in fig. 50, 7.  
Size 1.1"; wt. 11.981 gm. New type. Condition—slightly worn but fair. Ch. 43 AI-212, stratum 8.

*An anonymous Mahārathi chief*

19. *Obv.* Humped bull standing r. Inscr.: . . . . [Ma]hārathi . . . .  
*Rev.* l., tree within railing; r., crescent on hill of three arches in two tiers; below, indistinct traces of other symbols.  
Size 1"; wt. 6.905 gm. Only known coin of the Mahārathis showing bull standing right on obv. Condition—worn out by long circulation. Ch. 43 AI-26, stratum 6.

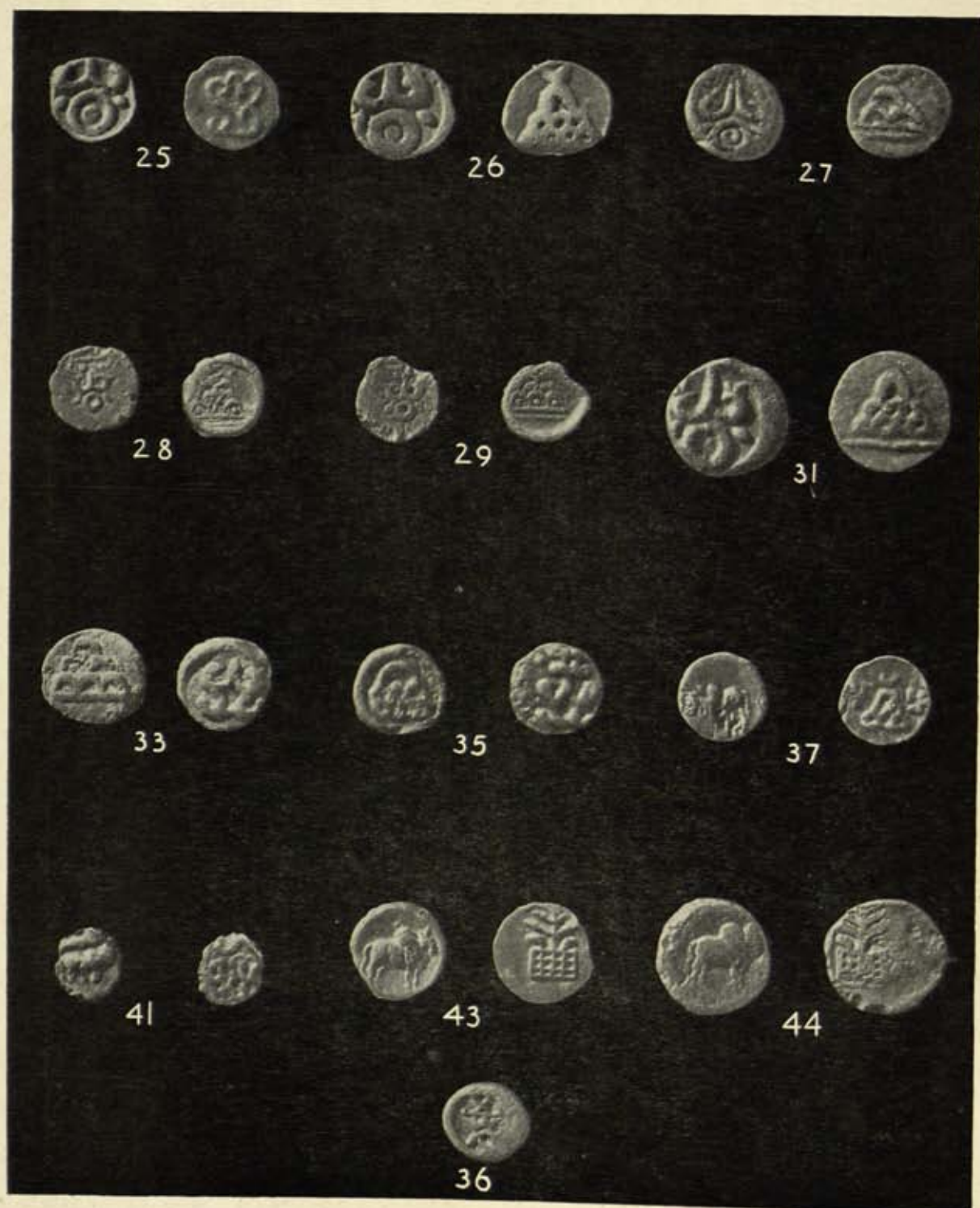
<sup>1</sup> V. S. Agrawala, 'Mathura Āyāgapattas', *Journ. U.P. Hist. Soc.*, XVI, part 1, figs. 1 and 2.





Chandravalli: Sātavāhana coins. 1





Chandravalli: Sātavāhana coins. 1



*Chutu Kaṣānanda*

(Same as Rapson, p. 59, pl. VIII, G.P. 2, found at Karwar in North Canara District.)

20. (pl. CXXVII, 20.) *Obv.* Chaitya, consisting of two tiers of small arches and one of large arch, with a line (river-symbol) below. *Inscr.*: Raño Chuṭu Kaṣeminādasā.  
*Rev.* Tree within railing; l., nandipada over svastika; r., symbol illustrated in fig. 50, 8 over triangle-headed standard.  
 Size 1.25"; wt. 16.848 gm. Note the legend shows *lem* instead of *la*. Condition—very good. Ch. 43 BI-98, Pit A = stratum 6.

*Inscribed coins of uncertain attribution*

21. (pl. CXXVII, 21.) *Obv.* Elephant standing l.; above, bow fitted with arrow pointing l. *Inscr.* [Raño] . . . . . na . . . . .  
*Rev.* Crescent on hill of three arches in two tiers with tree on l.; below, river-symbol represented by railing with a wavy line.  
 Size .93"; wt. 7.040 gm. New type. Condition—obv. fair but major portion of the legend off the flan; rev. slightly worn. Ch. 43 AI-156, stratum 6.  
 22. *Obv.* Defaced quadruped standing l. *Inscr.*: . . . . . sa . Kana . . . . .  
*Rev.* l., crescent on hill of six arches in three tiers with wavy line (river-symbol) beneath; r., tree within railing.  
 Size .82"; wt. 5.060 gm. New type. Condition—worn. Ch. 43 AI-28, stratum 5.  
 23. *Obv.* Design defaced. *Inscr.*: . . . . . S[ā]taka . . . . .  
*Rev.* Defaced.  
 Size .7"; wt. (fragmentary) 2.265 gm. The coin was perhaps similar to Rapson, pl. VIII, 164–177 with elephant on obv. and Ujjain symbol on rev. Condition—mutilated and highly corroded. Unstratified. Ch. 45 A<sub>2</sub>-52.  
 24. *Obv.* Defaced.  
*Rev.* Indistinct. Ujjain symbol.  
 Size .7"; wt. (fragmentary) 2.325 gm. Condition—broken and highly corroded. Unstratified. Ch. 45 A<sub>2</sub>-105.

*Uninscribed coins*

Type A

(Same as Rapson, pl. VIII, 207, found in the Āndhra-deśa between the rivers Krishṇā and Godāvarī.)

25. (pl. CXXVIII, 25.) *Obv.* Nandipada.  
*Rev.* Śrīvatsa-symbol.<sup>1</sup>  
 Size .64"; wt. 3.150 gm. Condition—good. Ch. 43 AI-214, stratum 9.

Type B, variety a

26. (pl. CXXVIII, 26.) *Obv.* Nandipada.  
*Rev.* Crescent on hill of eight arches in three tiers.  
 Size .71"; wt. 5.305 gm. New type. Condition—excellent. Ch. 43 ZI-70, stratum 7.

Type B, variety b

27. (pl. CXXVIII, 27.) *Obv.* Nandipada.  
*Rev.* Crescent on hill of three arches in two tiers with a line beneath.  
 Size .64"; wt. 2.660 gm. New type. Condition—fair. Ch. 43 ZI-81, stratum 9.

<sup>1</sup> This has been designated the 'nāga-symbol' by Rapson.



## Type B, variety c

28. (pl. CXXVIII, 28.) *Obv.* *Nandipada*.  
*Rev.* Crescent on hill of six arches in three tiers with a pellet in each arch.  
 Size .55"; wt. 2.5583 gm. New type. Condition—worn but fair. Ch. 43 AI-102, stratum 8.
29. (pl. CXXVIII, 29.) Same as no. 28.  
 Size .55"; wt. 2.2395 gm. Condition—slightly mutilated but fair. Ch. 43 AI-174, stratum 8.
30. Same as no. 28.  
 Size .53"; wt. 2.910 gm. Condition—worn and pitted. Unstratified. Ch. 45 A<sub>2</sub>-118.

## Type B, variety d

31. (pl. CXXVIII, 31.) *Obv.* *Nandipada*.  
*Rev.* Hill of eight arches in three tiers with a line beneath.  
 Size .75"; wt. 5.950 gm. New type. Condition—very good. Unstratified. Ch. 44 A<sub>1</sub>-89.

## Type C, variety a

32. *Obv.* Hill of six arches in three tiers.  
*Rev.* *Śrīvatsa*-symbol.  
 Size .65"; wt. (fragmentary) 2.755 gm. New type. Condition—mutilated and defaced. Ch. 43 AI-118, stratum 8.
33. (pl. CXXVIII, 33.) Same as no. 32.  
 Size .64"; wt. 3.053 gm. Condition—good. Ch. 43 AI-173, stratum 9.

## Type C, variety b

34. *Obv.* Hill of six arches in three tiers with a pellet in each arch; beneath, traces of a line.  
*Rev.* *Śrīvatsa*-symbol.  
 Size .6"; wt. 2.336 gm. New type. Condition—worn out. Ch. 43 ZI-82, stratum 9.

## Type D

35. (pl. CXXVIII, 35.) *Obv.* Hill of eight arches in three tiers.  
*Rev.* A new symbol (fig. 50, 9.)  
 Size .58"; wt. 2.597 gm. New type. The reverse symbol, of which the upper limb consists of a triangle-headed standard, is not known to occur on any Āndhra coins. Condition—very good. Unstratified. Ch. 44 A1-5.

## Type E

36. (pl. CXXVIII, 36.) *Obv.* Defaced.  
*Rev.* A new symbol (fig. 50, 10) which seems to be a combination of taurine and *nandipada*.  
 Size .54"; wt. 2.531 gm. New type. Condition—pitted and worn. Ch. 43 AI-103, stratum 8.

## Type F, variety a

37. (pl. CXXVIII, 37.) *Obv.* Humped bull standing l.  
*Rev.* Crescent on hill of six arches in three tiers; l., triangle-headed standard; r., *svastika*.  
 Size .59"; wt. 1.575 gm. New type. Condition—slightly mutilated but fair. Ch. 43 BI-89, stratum 8.
38. Same as no. 37.  
 Size .59"; wt. 1.647 gm. Condition—worn. Ch. 43 BI-90, stratum 8.

## Type F, variety b

39. *Obv.* Humped bull standing l.; crescent above.  
*Rev.* Crescent on hill of six arches in three tiers.  
 Size .43"; wt. .710 gm. New type. Condition—worn. Ch. 43 AI-49, stratum 5.



Type F, variety *c*

40. *Obv.* Humped bull standing r.  
*Rev.* Crescent on hill of six arches in three tiers; l., blurred triangle-headed standard; r. *svastika*.  
 Size .53"; wt. 2.184 gm. New type. Condition—worn but fair. Ch. 43 ZI-59, stratum 6.

Type F, variety *d*

41. (pl. CXXVIII, 41.) *Obv.* Humped bull standing r.  
*Rev.* Confused jumble consisting of crescent on hill and lower part of tree within railing.  
 Size .46"; wt. (fragmentary) .915 gm. New type. Condition—mutilated but fair. Unstratified.  
 Ch. 45 A<sub>2</sub>-164.

Type G, variety *a*

42. *Obv.* Humped bull standing r.  
*Rev.* l., tree within railing; r., *nandipada*.  
 Size .54"; wt. 1.705 gm. New type. Condition—worn but fair. Ch. 43 BI-99, Pit A = stratum 6.  
 43. (pl. CXXVIII, 43.) Same as no. 42.  
 Size .63"; wt. 3.165 gm. Condition—excellent. The *nandipada* on rev. is off the flan. Ch. 43 BI-100, stratum 7.  
 44. (pl. CXXVIII, 44.) Same as no. 42.  
 Size .72"; wt. 5.988 gm. Condition—good. Ch. 43 ZI-72, stratum 8.

Type G, variety *b*

45. *Obv.* Humped bull (head off the flan) standing r.; beneath indistinct symbol (hill?).  
*Rev.* Tree within railing.  
 Size .54"; wt. 1.060 gm. New type. Condition—worn. Ch. 43 BI-91, stratum 8.

## PART IV.—APPENDICES

### APPENDIX A

#### *The distribution of pointed-butt polished stone axes in India*

(Map, fig. 51)

Save for occasional reference to the distinctive 'shouldered' axes of the north-east, no study has yet been made of the polished stone axes of India. By far the most abundant type has a pointed butt, as have all the examples from Brahmagiri. Alongside this common feature, however, are others which, on further research, may be found significant either in a chronological or a geographical sense. Attention has been drawn above, for example, to the presence of a flat-sided type or sub-type in the earlier strata of the Brahmagiri series; and a detailed enquiry, based upon careful excavation, may reveal other distinctive features.

Meanwhile, a provisional list is here appended and mapped of the pointed-butt type as a whole, without differentiation. The fortuitous character of this map must be emphasized. The absence of axes from large areas, notably Central India, may well be due to the vagaries of the modern collector rather than to those of the ancient fabricator; particularly since numerous vaguely recorded (and unmapped) sites from Assam suggest a north-east to south-west orientation for the culture. It is to be hoped, however, that the publication even of a map so inadequately founded may stimulate the collection and recording of these implements. Whilst the scientific excavation of appropriate sites is essential to a substantive advance of knowledge, surface-finds have also a considerable value in the present rudimentary state of research.



# ABBREVIATIONS

Bruce Foote ..	..	Bruce Foote, R., <i>The Foote Collection of Indian Prehistoric and Protohistoric Antiquities: Notes on their Ages and Distribution</i> (Government Museum, Madras, 1916).
Coggin Brown ..	..	Coggin Brown, J., <i>Catalogue of Prehistoric Antiquities in the Indian Museum at Calcutta, Archaeological Survey of India</i> (Government Central Press, Simla, 1917).
A.S.I.R. ..	..	Archaeological Survey of India, <i>Annual Reports</i> (Superintendent of Government Printing, Calcutta).
J.A.S.B. ..	..	<i>Journal of the Asiatic Society of Bengal.</i>

## A. MADRAS PRESIDENCY

1. Anantapur district, from Emamoompur; Indian Museum, Calcutta.
2. Anantapur district, from Gunṭākal; Indian Museum, Calcutta.
3. Bellary district, from a site north-east of Ādōni; Indian Museum, Calcutta.
4. Bellary district, from Gadiganuru; Bruce Foote, p. 199, pl. 3.
5. Bellary district, from the Kapgal Hill; Coggin Brown, p. 75.
6. Bellary district, from Nandavaram; A.S.I.R., 1930-34, pl. CXXVIII.
7. Bellary district, from the Peacock Hill, 4 miles north-east of Bellary; Coggin Brown, p. 73, pl. VI.
8. Bellary district, from Raidrug; A.S.I.R., 1930-34, pl. CXXVIII.
9. Chingleput district, from Perumbair. Site omitted from the map, fig. 51.
10. Guntur district, from Amarāvati. Site omitted from the map, fig. 51.
11. Guntur district, found in 1944 about 5 miles from Nāgārjunīkonda on the road to Macherla.
12. North Arcot district, Vellore Tāluk, from Tulleh; Coggin Brown, p. 69, pl. V.
13. Salem district, Krishnagiri Tāluk, from Uttāngiri; information from Mr. K. Narayan Iyengar, Curator, Mysore Government Museum, Bangalore.
14. Salem district, from the Shevaroy Hills; Coggin Brown, p. 70, pl. V.
15. Salem district, Tirapatur tāluk, from Mangalam; Coggin Brown, p. 70, pl. V.
16. Salem district, from Yellagiri; A.S.I.R., 1930-34, pl. CXXVIII.
17. Salem district, site not named; Indian Museum, Calcutta.
18. South Arcot district, from the Javadi Hills; A.S.I.R., 1930-34, pl. CXXVIII.
19. South Arcot district, from Tiruvakkarai, an urnfield about 7 miles west of Pondicherry.
20. Tanjore district, Kumbakonam tāluk, Aduturai; *Madras Mus. An. Rep.*, 1936.

## B. FRENCH INDIA

21. Arikamedu, near Pondicherry; *Ancient India*, no. 2 (1946), p. 104.

## C. MYSORE STATE

22. Bangalore district, from Sāvandurg, 22 miles west-south-west of Bangalore; information from Mr. K. Narayan Iyengar.
23. Chitaldrug district, from Brahmagiri.
24. Chitaldrug district, from Chandravalli; Mysore Government Museum, Bangalore.

## D. HYDERABAD STATE

25. Raichūr district, from Anandgal; information from Khwaja Muhammad Ahmad, Director of Archaeology, Hyderabad.
26. Raichūr district, from Anegandī opposite Hampī; Indian Museum, Calcutta.
27. Raichūr district, from Kautal; information as for no. 25.
28. Raichūr district, Kotegal; information as for no. 25.
29. Raichūr district, from Māsiki; *Annual Report of the Archaeological Department, Nizam's Dominions*, for 1936-37 (published 1939), pp. 14-15, pl. X.



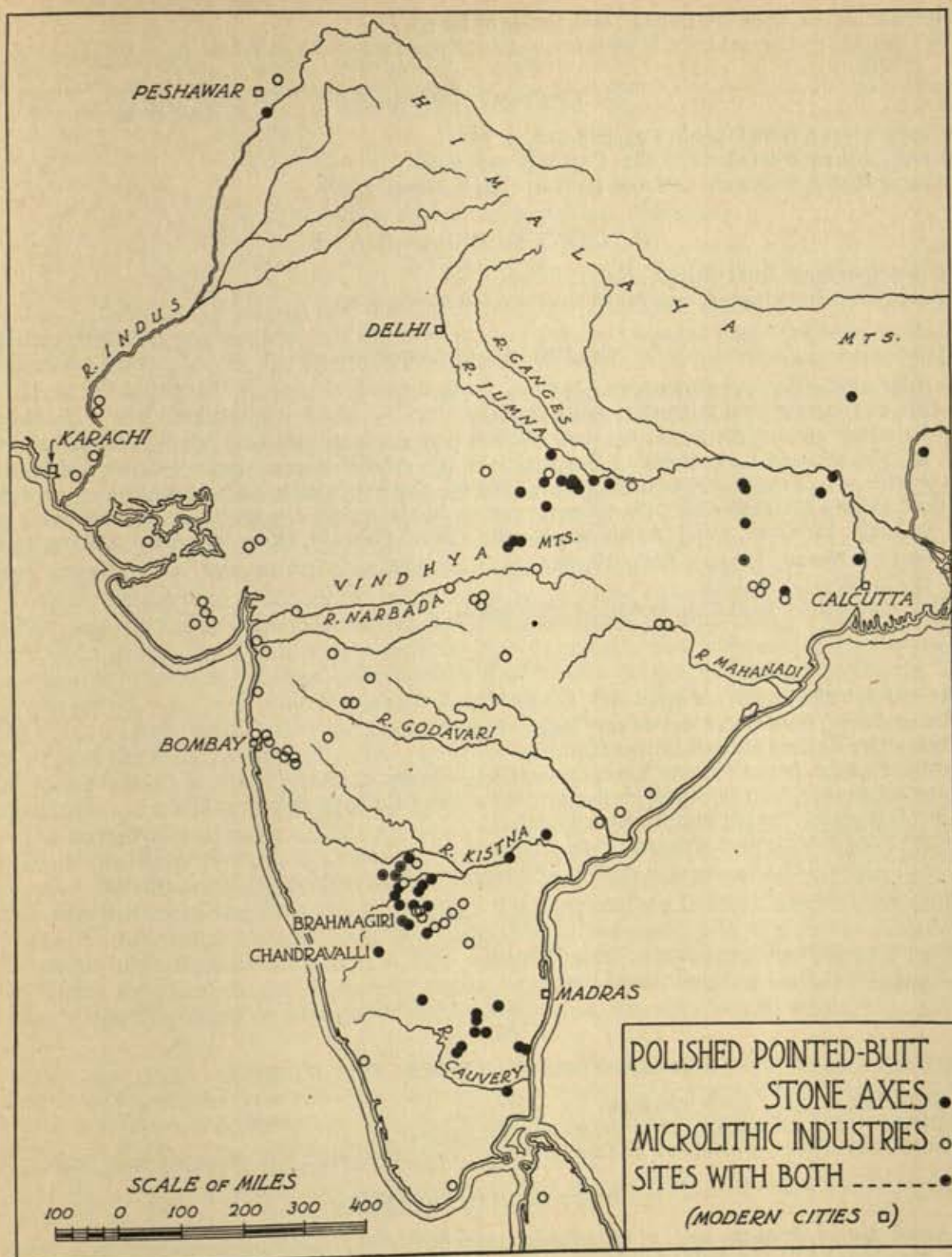


FIG. 51  
(Add microlithic site at Jalahalli, Bangalore.)



30. Raichūr district, from Rodalkonḍi; information as for no. 25.
31. Warangal district, from Matūr, 27 miles south-east of Khammamett; *J.A.S.B.*, LVI, pt. II, no. 3 (1887), p. 265.

#### E. CENTRAL PROVINCES

32. Saugor district, from Damoh; Coggin Brown, p. 84.
33. Saugor district, from Garhī Morilā; Coggin Brown, p. 84.
34. Saugor district, from Buhuterāi near Damoh; Coggin Brown, p. 103.

#### F. CENTRAL INDIAN STATES

35. Chhatarpur State, from Golganj; Coggin Brown, p. 85.
36. Pannā State, from Jhannā, near Pannā town; Coggin Brown, p. 82.

#### G. UNITED PROVINCES

37. Allahabad district, from Garhwā; Coggin Brown, p. 85.
38. Allahabad district, from Kauśāmbī; Patna Museum.
- 39 to 58. Bāndā district; the district has been explored by many, amongst whom W. Theobald (cf. *J.A.S.B.*, 1862, p. 323) and J. Cockburn (cf. *J.A.S.B.*, 1879, p. 137–141) deserve special mention. Most of the specimens collected are now in the Indian Museum, Calcutta, while some examples are in the Baroda and Madras Museums also. The following twenty sites have yielded 'pointed-butt' polished stone axes: Duranda, Manikpur, Karvi, Agrahonra, Bagrahi, Gurha, Gaorikar, Girwa, Garohapa, Kasaha, Loreta, Muraol, Nuseni, Pungari, Rāmgār, Marphā, Risri, Shāhpur, Terayan and Āchā; Coggin Brown, pp. 70–87, pls. V and VI.
59. Hamīrpur district, from Chandrawārā; Coggin Brown, p. 85.

#### H. BIHAR

60. Hazāribāgh district, site not mentioned; Indian Museum, Calcutta.
61. Patna district, from Ghōrā Kaṭorā near Rajgir; Patna Museum.
62. Patna district, from Nālandā; Patna Museum.
63. Rānchi district, from a site near Rānchi town; Coggin Brown, p. 127.
64. Santāl Parganas, from Sāhebganj on the bank of the Ganges; Coggin Brown, p. 130.
65. Santāl Parganas, site not named; Patna Museum.
66. Singhbhūm district, site not named; Patna Museum.

(Note.—The specimens in the Patna Museum have been examined by Mr. A. Ghosh.)

#### I. WEST BENGAL

67. Darjeeling district, site not named; Patna Museum.
68. Nadiā district, from a site near Nadiā town.

#### J. ASSAM

(Information from Mr. J. P. Mills, C.I.E., I.C.S.)

69. Garo Hills district; fairly numerous.
70. Cāchār district; numerous. Not shown on map, fig. 51.
71. Nāgā Hills district, around and north of Kohuna; very numerous. Not shown on map, fig. 51.

#### K. WEST PUNJAB (PAKISTAN)

72. Attock district, from the bank of the Indus opposite Shādīpur, 21 miles south-west of Attock; found in May 1880 by W. Theobald of the Geological Survey of India; *Records of the Geol. Surv. of India*, XIII, 176; also Coggin Brown, p. 120, pl. VII.



## L. BURMA

73. The Indian Museum, Calcutta, collection also contains some 'neolithic' celts from Burma. The characteristic Burmese specimens are 'shouldered', but pointed-butt examples have also been obtained. The sites are not named.

## APPENDIX B

*The distribution of Indian microlithic industries*

(Map, fig. 51)

The distribution of microlithic industries in India was tabulated in 1938 by Col. D. H. Gordon,<sup>1</sup> and the only notable additions to his list are the Gujarat sites carefully excavated in recent years by Dr. H. D. Sankalia,<sup>2</sup> Māski in Hyderabad State,<sup>3</sup> the northern bank of the Narbada north of Rājpiplā, Sawyerpura in the Tinnevely district,<sup>4</sup> Jalahalli near Bangalore,<sup>5</sup> and Brahmagiri itself. The recorded sites extend from Karachi in Sind on the west to Serāi Kalā in Bihar on the east; and from Jamāl Garhi (Mardān tahsil) in the North-West Frontier Province to Tinnevely in the south. With even more emphasis than in the case of the polished stone axes (which at least have constant and evolved features), it must be stated that, within the vast geographical framework indicated, the known distribution of these crude chips of jasper, chert, chalcedony or quartz is at present governed largely by chance. Parts of western India have been more extensively examined than have other regions which, for all we know, may prove to be equally rich in microlithic sites.

Nor are the implements themselves, for the most part, of sufficiently evolved types to enable us to group them with any assurance typologically. The trapezoidal and triangular forms scarcely occur at all, and the crescent is rare (one poor specimen only, for instance, at Brahmagiri). A vast majority of the implements are simple flakes with little or no retouching. Their small size may, as Gordon observes, be 'compulsory, owing to the small size of the stone available'. On the other hand, the choice of this small material was a deliberate act of a given phase or phases, so that the argument from material does not carry us far. And if a typological classification is difficult, a chronological one is no less so. On admittedly sketchy evidence, Gordon thought that the Māski microliths might date from the third century B.C. to the first century A.D. At Brahmagiri, this is precisely the period of the Iron Age megalithic culture which *succeeded* the microlithic industry. In the circumstances the difference of date is not important; but at Langhnāj in Gujarat Dr. Sankalia found the main series of his microliths in pre-pottery layers and in association with mineralized human skeletons. This looks like an earlier dating, though nothing approaching an absolute chronology is available for the site. Much further digging of a peculiarly exacting kind is necessary before conjecture becomes worth while.<sup>6</sup>

<sup>1</sup> *Man*, 1938, no. 19. See also a list of Godāvarī sites by L. A. Cammiade in *Man in India*, IV (1924), 83ff.

<sup>2</sup> *Investigations into the Prehistoric Archaeology of Gujarat* (Baroda State Press, 1946); 'The second Gujarat Prehistoric Expedition; a preliminary Account of the Search for Microlithic Man in Gujarat', *New Indian Antiquary*, VII (1944), no. 1. Also *Preliminary Report on the Third Gujarat Prehistoric Expedition and Human Remains discovered so far* (The Times of India Press, Bombay, 1945).

<sup>3</sup> *An. Rep. of the Arch. Dept. of the Nizam's Dominions*, 1935-36 (pub. 1938), p. 23 and pl. III; D. H. Gordon in *Journ. Roy. As. Soc. Bengal*, IX (1943), 88ff.

<sup>4</sup> A. Aiyappan in *Spolia Zeylanica*, XXIV (Colombo, 1945), pt. 2.

<sup>5</sup> K. R. U. Todd, *Man*, 1948, no. 27. (Omitted from map, fig. 51.)

<sup>6</sup> For a summary of the present position, see V. D. Krishnaswami in *Ancient India*, no. 3 (1947), pp. 36-7.



## APPENDIX C

*The date of megalithic tombs in India*

The Brahmagiri excavations have indicated (above, p. 200) the middle of the first century A.D. as the *terminus ante quem* for this typical group of port-holed megalithic cists, and it has been inferred that a majority of them, at this site, were built during the last two centuries B.C. The very few other chronological data from India in respect of megalithic tombs are quickly summarized, and are as follows :—

1. At Sultur, 7 miles east of Podanur Junction in the Palladam Taluk of the Coimbatore District, Madras Presidency, is an important group of megalithic cists, mostly of port-holed type and surrounded by stone circles. In excavating one of these tombs, Col. W. H. Tucker found deep down in it, with glass, steatite and carnelian beads and fragments of an iron dagger, a bronze coin identified by Dr. John Allan of the British Museum as a coin of Eran, struck in the third or second century B.C. This is the best evidence for the dating of a megalithic tomb in India, other than at Brahmagiri. See the 'India' number of *Man*, 1930, no. 134 (p. 172).

2. A former Collector of Coimbatore named Garrow, in a letter, dated 1817, alludes to a silver coin of Augustus found, perhaps with a number of irregularly shaped punch-marked coins, in a *Pandu Culi* (megalithic tomb). According to other accounts the punch-marked coins were found in another tomb. See *Madras Journ. of Literature and Science*, XIII (1844), 214; *Ind. Antiquary*, II (1873), 241; *Num. Chron.*, I, VI (1843-4), 162; *Journ. Bombay Branch Roy. As. Soc.*, I (1843), 293.

3. In a port-holed cist excavated by Mr. Govinda Menon at Tiruvilvamala, Cochin State, were found pots decorated with a white or yellow curvilinear pattern under a russet slip (see *Man*, 1937, no. 179). This technique and decoration occur abundantly in the Coimbatore District but have not been dated. On the other hand, the very distinctive technique is identical with that of the yellow-painted 'Āndhra' pottery of Chandravalli and Brahmagiri (above, pp. 236 and 278), where, however, rectilinear patterns were in vogue and curvilinear patterns absent. The Āndhra pottery seems to begin in the earlier half or middle of the first century A.D. It cannot be unrelated to the Coimbatore pottery, but exact chronological equation between the two cannot be assumed without further evidence.

4. A further piece of evidence of a less direct kind is the recent (1947) and unpublished discovery at Arikamedu (Pondicherry) of pottery of the distinctive 'Megalithic' fabric intermingled with typical 'Arikamedu' pottery of the early or middle first century A.D. See above, p. 273. A similar overlap is now recorded at Chandravalli. In both cases a majority of the pottery-types differ from those from the Brahmagiri megaliths, but the identity of fabric suggests a significant interrelationship.

Of the four scraps of evidence detailed above, the first and, to a less extent, the last carry some positive weight, and all are consistent with the Brahmagiri dating.

## APPENDIX D

*The distribution of cists with port-hole in India*(i) *General factors.*

Megalithic cists, often with port-holes, are very numerous in Peninsular India between 10° and 18° of latitude. Below 10°, in the tip of the Peninsula south of Madurā, they appear to be absent, though vaguely related urn-fields such as the celebrated example at Adichanallur near Tinnevely are present there. Above 18° there are likely to be unrecorded



cists and port-holes, extending perhaps as far north-eastwards as the granite exposures, i.e. to the neighbourhood of 25° of latitude. The appended list of known sites (p. 305 and fig. 1), however, does not reach in that direction beyond the vicinity of Hyderabad city in the Nizam's Dominions.

Even within these limits, our present knowledge of the distribution and variations of the type in the Deccan and the South is insufficient to support detailed theory. Ground-survey and excavation are alike lacking. The latter is as necessary as the former, for without excavation it is usually impossible to ascertain whether or not a port-hole is present. Thus, although the whereabouts of many thousands of South Indian megaliths is actually known, the map-picture of the port-holed type is still to some extent fortuitous. The ground-survey of megaliths now being prepared by the Archaeological Survey of India will therefore, it is to be hoped, be followed by carefully distributed excavation. Meanwhile, the map here published indicates the known distribution of port-holed cists in general terms.

The location of megalithic tombs in Central and South India is presumably in large measure conditioned materially by that of the fissile granite and the easily-cut laterite from which they are most readily constructed; they 'spill over' into limestone and sandstone formations but are not characteristic of them. Within these main geological limits, the simpler port-holed cists occur largely on the Deccan plateau and its southern extension in Mysore State, whilst the more elaborately planned tombs with port-holed partitions and occasionally with short approach-galleries or porches—approximating sometimes to the passage-graves and sometimes to the gallery-graves of the European nomenclature—appear to prefer the southern coastal plain, as in Pudukkottai State.<sup>1</sup> This seemingly differential distribution is noted here provisionally, but until we know something about the relative dating of these two groups it would be foolish to theorize. In particular, we must wait patiently until the relationship of megalithic tombs with the arterial river-valleys which link the plateau with the coasts becomes clearer upon the map.

Outside the Peninsula there is no evidence for port-holed cists in India. But there is another region of potential importance in this context, one to which the archaeologists of Pakistan and India may be invited to give some special attention. In the fifties of the nineteenth century a Captain Preedy, then Collector of Karachi, travelled about his district with open eyes and, amongst other things, noted that 'stone graves . . . . are found in great numbers throughout the hilly district which extends along our western frontier. They are usually met with in elevated positions, and consist of three or four large stones set on edge, with a flat stone placed horizontally on the top. There would appear to have been no uniform rule observed as to the direction in which these graves were placed . . . . I had the pleasure of pointing out one of these groups to you a few days ago, on the hills near Waghodur, and I think we both agreed that, with the exception of the hole in one of the side stones or walls, the graves exactly resemble those described by Captains Taylor and Congreve' (in the Deccan and the Nilgiris).<sup>2</sup> H. B. E. Frere, then Commissioner in Sind, adds that 'cairns and cromlechs, such as are described by Captain Meadows Taylor, are common on the road to Shāh Billāwal, in Baluchistan, and also in the hills on the direct road from Karāchi to Kotri. They are generally known as Kaffirs' graves'.<sup>3</sup> Waghodur lies 20 miles east of Karachi, and if Preedy's circumstantial observation is correct, we appear to have here, near the mouth of the Indus, an outlying group of megalithic cists

<sup>1</sup> It may be suspected that the technical facilities presented to the stone-cutter by the soft coastal laterite contributed to this elaboration.

<sup>2</sup> *Journ. Bombay Branch of Roy. As. Soc.*, V (1857), 353f.; whence H. Cousens, *The Antiquities of Sind*, Arch. Sur. India, Imperial Series, XLVI (1929), 44-5.

<sup>3</sup> *Journ. Bomb. Br. R.A.S.*, V, 349.



which *may* constitute an important addition to our distribution-map. I have neither seen these cists myself nor know any one who has—they have not been looked for recently, and at the time of writing the political situation is unfavourable to archaeological exploration in Sind.

Between the Peninsula and the Karachi District, vast areas have never been adequately surveyed from this standpoint, and it is likely enough that search will in fact reveal links between the two regions. Meanwhile the utmost caution must be exercised in associating cists or dolmens *without* port-holes with the more specialized type. The most ardent diffusionist could scarcely maintain that all rudimentary stone cists, wherever found, are cousins germane to one another; attention has been drawn above, for example, to the familiar medieval and modern practice of erecting open-ended 'dolmens' (never with port-holes) as simple shrines in many parts of India (pl. CXXVI A)—a practice which may have been suggested by, or even remotely derived from, the ancient burial-cists but has no integral connection with the main problem.

In this non-committal sense, reference may here be made to the recorded occurrence of simple megalithic cists, seemingly without port-holes, in certain other parts of India. Thus Cunningham, who used the word 'cromlech' for these cists, vaguely affirms that cromlechs, cairns and stone circles 'have already been found in the hilly parts of the districts of Delhi, Mirzapur, and Orissa'.<sup>1</sup> This observation has not been confirmed. Cunningham's assistant, A. C. L. Carlleyle, noted within one of four stone circles at Deosa, a village 32 miles east of Jaipur in Rajputana, a cromlech '6 feet square and about 4 feet in height', the walls composed of 'four rough slabs of stone set up on end. The top of the cromlech was imperfectly covered by two narrow slabs'.<sup>2</sup> Today, only a circle of boulders enclosing an erect boundary-stone is to be seen on the site. An earlier observer found small granite and 'slate' cromlechs at Deodhoora, 18 miles south-east of Almora in northern U.P., but they were mostly if not entirely used as shrines and, on the evidence, may be discounted.<sup>3</sup> In the remoter depths of the Himalayan massif, however, authentic burial-cists have been discovered in the Leh valley of Ladakh, near the western border of Tibet. In 1903 and again in 1909 one or more of these graves was opened. The roof was 'more than a yard below the present level of the ground. It consists of large unhewn stones of rectangular shape, each about 1½ yards long and a foot or so broad. The walls consist of large unhewn stones. The grave is about 2 yards long, 1½ yards broad, and at least 6 feet deep.' The contents included objects of iron and bronze, together with pots ornamented with simple designs either 'impressed' or painted in dark red colour and mostly filled with disarticulated human bones. The finder refers to ancient records of the custom of excarnation in the 'Empire of the Eastern Women', i.e. Khotan, Ladakh, the upper Ravi valley and Tibet.<sup>4</sup>

I have insisted upon these outlying occurrences of a megalithic usage, not because they materially change the dimensions of the problem, but in the hope of stimulating a further search for megaliths in North India and of preventing too firm a prejudgment of the issue. Nevertheless, whatever future search may reveal in the North, it cannot now upset the huge

<sup>1</sup> *Arch. Surv. of India Reports*, I for 1862–65 (Simla, 1871), Introduction, p. xxx.

<sup>2</sup> *Ibid.*, VI for 1871–73, 104ff. At Khera, 4 miles west of Fatehpur Sikri near Agra, U.P., Carlleyle also found flat-topped 'cairns' of 'an irregular rough four-sided shape, with generally sloping sides, and surmounted at the top either by slabs of stone or by the remains or fragments of slabs'. The illustrations do not suggest tombs of our type.—*Ibid.*, p. 14. Recent search on the ground has failed to rediscover these cairns or anything like them.

<sup>3</sup> W. J. Henwood in the *Edinburgh New Philosophical Journal*, New Series (Edinburgh, 1856), pp. 204–5.

<sup>4</sup> A. H. Francke in *Arch. Surv. of India An. Rep.*, 1909–10, pp. 104ff.



preponderance of megalithic cists in the South, particularly of the significant port-holed type.

There is a further element of uncertainty which must not be forgotten at the present stage. Our dating of the port-holed cists is at present based largely upon the evidence of a single site in northern Mysore slightly supported by the evidence of a single find in the Coimbatore District and now perhaps by a little ceramic evidence from Arikamedu and Chandravalli (above, p. 300). If we date our Brahmagiri series mainly within the last two centuries B.C. (above, p. 202), it is to be presumed that other groups are of a somewhat earlier date, and the presumption becomes a certainty if coastal entry can be proved. Once again, excessive generalization from our limited evidence must be avoided.

With these important provisos, I am tempted to indulge for a moment in a speculation which may at any rate serve to stress the need for a further investigation of the little-known Karachi group. Karachi, approximating to the ancient Patala (? Hyderabad in Sind), was the first port of call in India for coastwise and even deep-sea trade with the Mediterranean world, before the fuller use of the monsoon facilitated more profitable direct voyages to the Bombay and Malābār coasts. Of the four successive stages recognized by Pliny in the evolution of this maritime traffic, Karachi (or its equivalent) was the goal of the first two, and the south-western ports were the goals of the second two.<sup>1</sup> The latter were probably not fully developed until the time of Augustus (23 B.C.–A.D. 14), prior to whom the north-western ports must have dominated the scene. But we know almost nothing of the local middle-man trade which preceded the organized imperial commerce of Augustus and his successors, and the use of the monsoon-route to Malābār is likely enough to have been familiar to Arab sailors, or some of them, long before the principate.<sup>2</sup> It is in any case sufficiently probable that coastwise traffic down the west coast long preceded the opening-up of the Peninsula by direct voyages.

We have, then, a general picture of Western trade concentrating first upon Karachi and then swinging southwards to the southern Bombay and Malābār seaboard and thence across and around the Peninsula. If it should turn out that we have also megalithic tombs, of a type familiar in the West, on the one hand at Karachi and on the other hand across Peninsular India, the coincidence would become alluring. There are in this composite picture many undetermined factors of time and space which are vital. But on the commercial side the development, whatever its origin and dating in detail, belongs in the main to the three centuries which followed the opening up of the East by Alexander the Great; and now we have in northern Mysore a typical group of Indian megaliths dated within those three centuries. Furthermore, in the critical third century B.C. we have the evidence of the Rock-edicts II and XIII that Aśoka was in close contact with the rulers of the eastern Mediterranean—Antiochos Theos, king of Syria and Western Asia; Ptolemy Philadelphos, king of Egypt; Magas, king of Cyrene; Antigonos Gonatas, king of Macedonia; and perhaps Alexander, king of Epirus. This is a formidable list. Aśoka cites it in relation to his proselytizing activities amongst his 'neighbours', but it is fair to suspect that this high-level neighbourliness had a sound material basis in the form of a trade which may itself be of pre-Aśokan origin. If now in northern Africa or Syria convincing evidence for Iron Age megaliths of the Indian type were forthcoming, the problem would begin to assume a reasonable shape. Much research is needed, however, outside no less than inside India, and in Arabia no less than in the Mediterranean area.

<sup>1</sup> *Nat. Hist.*, VI, 100-1.

<sup>2</sup> W. W. Tarn, *The Greeks in Bactria and India* (Cambridge, 1938), pp. 368ff., prefers a date c. 50 B.C. for the development of monsoon-navigation and the diversion of main-line traffic from Karachi to the south-western coast. Finality in the matter is impossible—the transition presumably covered a considerable period (see below).



There are other factors. If the Brahmagiri evidence is at all representative, at some moment little more than a century after the time of Alexander the Great a lavishly equipped Iron Age megalithic culture intruded into the Deccan plateau upon a primitive, mainly stone-using culture with such dramatic suddenness as to imply some strong stimulus. That stimulus was doubtless augmented by local opportunity (above, p. 202), but is unlikely perhaps to have originated wholly within the Peninsula itself; the cultural gap between the Polished Stone Axe folk—whose scattered remains are widespread in the Deccan and South India (see p. 295)—and the Megalith folk is too great to imply any long-standing proximity of the one to the other. Nor can it have come from the north, from that great *officina* of Indian civilization, the Gangetic plain; for there megaliths and the materials for making them are alike absent. Nor can it have come from the north-east or from Indonesia, where port-holed tombs do not occur. It must have come from the north-west, from the mountains or the sea. It may of course be mere coincidence that the known development of Indian international trade followed a similar path. It may be that future exploration will fail to show that the Karachi tombs, if they still exist, are earlier than those of South India, as some of them should be if the analogy from trade-development is valid. I am merely suggesting possibilities for further enquiry, and do not—at present cannot—propound a substantive documented theory.

There is indeed another and fundamental aspect of distribution which underlies the whole of this discussion. I have assumed the possibility of an integral connection between the port-holed cists of India and those of western Asia and Europe, in spite of the wide disparities of time and place. Those disparities, however, and particularly that of time,<sup>1</sup> are not negligible, and, until they are confirmed or resolved by much further exploration, interrelationship remains no more than a possibility or, at the best, a likelihood. A useful, though not necessarily convincing, scepticism is expressed from time to time by writers on the subject. Thus G. E. Daniel, to whom we are indebted for important studies of European megaliths,<sup>2</sup> remarks that 'the megalithic structures of Africa, the Near East, India, Indonesia, and Japan have probably little more in common with the burial chambers of prehistoric Europe than the use of large stones for orthostatic walling and trabeate roofs'. This is a drastic simplification of a complex problem. While Indonesia and the Pacific may well be a separate matter (see above, p. 183), the apparent affinity of the Near Eastern and Indian monuments with those of Europe cannot be so summarily discounted. Without more proof than exists, it is not easy to assume the independent origin of the port-holed cist in regions which, however far apart, have long been interconnected by sea.

#### (ii) *Cists and dolmens: nomenclature*

In collecting the material upon which the summary map (fig. 1) is based, I made a provisional distinction between *dolmens*, i.e. large cists built on the surface of the ground, and large cists buried wholly or mostly in the ground. This distinction, however, in India as elsewhere, is of no primary importance. There is little doubt that in all cases in India the structure was finally buried up to or even above the capstone either in the ground itself or in a barrow or cairn, generally circular on plan and often outlined by stone blocks, slabs or walling. The cist may be built on the natural surface, or partially buried, or completely buried to capstone-level, or sunk into the ground so that the capstone is several feet

<sup>1</sup> The European megalithic tombs may mostly be ascribed to 2500–1500 B.C. Africa is an unknown quantity, and Syria requires further exploration. For the whole problem, see Professor Gordon Childe's important article above, pp. 5ff.

<sup>2</sup> *Proc. of the Prehistoric Society*, VI (Cambridge, 1940), 133ff., and VII (1941), 1ff.



below the natural surface. One, though not the only, conditioning factor is that of practicability, the proximity or otherwise of the native rock to the surface and the relative facility with which a pit could be prepared. Deeply buried cists are perhaps a local fashion; for example they occur in some numbers in Hyderabad State (Deccan)<sup>1</sup> but were absent from our Mysore series. On the other hand, an extensive megalith cemetery in the jungle near Savandurg, 22 miles west-south-west of Bangalore in Mysore State, contains examples of free-standing port-holed 'dolmens' intermingled with identical port-holed cists at all stages of submersion down to capstone-level. Here the principle of varying practicability seems to have controlled the situation.

In short, the word 'dolmen' has no scientific validity in India. The character of the megalithic tomb-structure is not materially influenced by its position on or below the surface. Even in the deeply buried cists of Hyderabad (Dn.) the port-hole is sometimes present, although the insertion of the bones and offerings before the lowering of the capstone or capstones into position must usually have been the easier method and the port-hole is consequently absent in a majority of the excavated examples.

On the present map all megalithic port-holed cists are grouped together, irrespective of degree of burial below the natural surface.

(iii) *Provisional list of cists with port-holes in India* (map, p. 180, fig. 1)

The following list, prepared mainly by Mr. V. D. Krishnaswami, contains recorded and some previously unrecorded megalithic cists distinguished by the port-hole opening and generally by a surrounding circle of boulders or slabs. It represents only a small fraction of the total number which further exploration may be expected to reveal, but is sufficiently large to indicate the main areas of distribution. Only in the peripheral regions is an appreciable modification of the map likely to become necessary in the future.

ABBREVIATIONS

A.P.R.	..	..	Annual Progress Report, Archaeological Survey Department, Southern Circle, Madras.
Fergusson	..	..	J. Fergusson, <i>Rude Stone Monuments in All Countries</i> (London, 1872).
G.O.	..	..	Government Order.
Meadows Taylor	..	..	<i>Megalithic Tombs and other Ancient Remains in the Deccan</i> , papers by Colonel Meadows Taylor reprinted for the Archaeological Department of Hyderabad State (1941) from the <i>Journal of the Bombay Branch of the Royal Asiatic Society</i> , III-IV (1851-52), and the <i>Transactions of the Royal Irish Academy</i> , XXIV, pt. III (1862).
Sewell	..	..	R. Sewell, <i>Lists of the Antiquarian Remains in the Presidency of Madras</i> (Archaeological Survey of Southern India, Madras, 1882).

A. MADRAS PRESIDENCY

1. Anantapur district, Dharmavaram taluk, at Moodheguloor village. Meadows Taylor, p. 86.
2. Anantapur district, Kalyāndrug taluk, at Midigallu village, which is three miles east of Kalyāndrug. *Anantapur Gazetteer*, 1905, pp. 175-6; G.O. nos. 975 Public, 4th Aug. 1913; A.P.R. 1912-13, pp. 52-63. G.O. no. 1321, Public, 23rd October 1913 (Mis.) (not printed).
3. Bellary district, Ādōni taluk, about a mile S. of Kosigi village, which is about 18 miles N. of Ādōni. Meadows Taylor, p. 55.

<sup>1</sup> E.g. Meadows Taylor, *Megalithic Tombs and other Ancient Remains in the Deccan* (papers collected and republished by the Archaeological Department of Hyderabad State, 1941), pls. X and XI; E. H. Hunt, *Hyderabad Cairns* (Bombay, 1916).



- 4-7. Bellary district, Rāyadrug tāluk, at Addagoopah, Gollapalle and Mallapuram villages, all about 30 miles S. of Bellary. Meadows Taylor, p. 86; *Journ. Roy. As. Soc. Bombay Branch*, IV (1853), pp. 412, 428; *Trans. Roy. Irish Acad.*, XXIV (1873), Antiquities, pp. 329ff.; A.P.R., 1912-13, p. 42.
8. Chingleput district, Srīperumbūdūr tāluk, Tattanūr village.
9. Chittoor district,<sup>1</sup> Chittoor tāluk, near Kalavagunta village, 5 miles N. of Chittoor. Capt. Newbold in *Journ. Roy. As. Soc.*, O.S., XIII, p. 90; Sewell, p. 155.
10. Chittoor district, Chittoor tāluk, at Paradarāmi village. Sewell, pp. 155-6.
11. Chittoor district, Punganūr tāluk, at Chiri-chinta-vāripalle village. Six circles enclosing cist with portholes.
12. Chittoor district, Punganūr tāluk, at Settippetta village.
13. Chittoor district, Vayalpad tāluk, near Vayalpad village. *Madras Administrative Report*, 1938-39, pp. 178-9.
- 14.<sup>2</sup> Chittoor district, Palmaner tāluk, Iralabanda village, near Palmaner. *Indian Antiquary*, X (1881), pp. 97-100.
15. Chittoor district, Tiruttani Zemindari tahsil, at Tiruvelangād village.
16. Coimbatore district, Erōde tāluk, Brouhgnagar village (Nichchampalaiyam). Observations by A. H. Longhurst, 1928.
17. Coimbatore district, Palladam tāluk, Nilambūr village. *Madras Mail* newspaper, 14th September, 1935.
18. Coimbatore district, Palladam tāluk, Sūlūr village, *Man*, XXX, no. 10, Oct. 1930, p. 171, etc.
19. Cuddapah district, Kamalāpuram tāluk, Palagiri on the left bank of the Mogameruru Nadi, 2 miles W. of the road Vempalle-Erraguntala. *Cuddapah District Gazetteer*, p. 205, plate facing p. 25.
20. Cuddapah district, Siddhavattam tāluk, at Vontimitta village, 8 miles S.E. of Siddhavattam town. A.P.R., 1912-13, pp. 65ff.
21. Guntūr district, Narasārōpet tāluk, near Kamēpalle village. G.O. no. 382, Public, 30th April, 1889, p. 12.
22. Madura district, Kodaikānal tāluk, 14-17 miles from Kodaikanal G.O. no. 1663, 16th Dec., 1887, p. 7.
23. Nilgiri district, Coonoor tāluk, about a mile from Udayarāya fort, which is 5 miles E. of Kotagiri. H. Congreve in *Madras Journ. of Lit. and Sc.*, XIV (1847), p. 123 and pl. 9; Sewell, p. 228. J. W. Brecks: *Primitive Tribes of the Nilgiris*, p. 106, pl. LXXV.
24. Nilgiri district, Coonoor tāluk, Kōtagiri, 17 miles E. of Ootacamund, on the slopes close to the site of the ruined fort of Udayaraya. *Nilgiri Manual*, pp. 237-8.
25. North Arcot district, Ārkonam tāluk, Ariyūr village.
26. North Arcot district, Ārkonam tāluk, Karikāntāngal village (hamlet of Vangapattu).
27. Salem district, Hosūr tāluk, between Mudagherri and Killamungalam villages. Sewell, Appendix, p. xxxii.
28. Salem district, Hosūr tāluk, Uddanapalle, 12 miles S.E. of Hosūr and 9 miles N.W. of Rayakōta. H. Congreve in *Madras Journ. of Lit. and Sc.*, 1878, p. 162. Sewell, p. 195.
- 29-30. South Arcot district, Tirukkoyilūr tāluk, 4 miles from Rirukkoyilur village on the left bank of the Ponnaiyar river near the village of Kollur; another group about 1½ miles from Tirukkoyilūr on the opposite bank of the river about ¾ mile N. of the Arakandanallur temple. *Indian Antiquary*, V (1876), pp. 159, 255.
31. South Arcot district, Gingee tāluk, at Sattiyamangalam village, 7½ miles to the west of Gingee town. In one case, where the cist had been rifled, the easternmost orthostat contained a port-hole 22" in diameter. The cist measured 5' 5" × 4' 10" × 5' 2½".

#### B. COORG PROVINCE

32. Nanjarajapattana tāluk, Sirangala village (now North Coorg tāluk, Fraserpet Nad), 7½ miles N. by S. of Fraserpet. A. Rea, *List of Architectural and Archaeological Remains in Coorg* (Arch. Survey of India, New Imperial Series, XVII, 1894), p. 7.
33. Yedenalknād tāluk (now South Coorg tāluk), Virarājendrapet village. *Proc. As. Soc. Bengal*, 1868, p. 162; Fergusson, p. 472.
34. North Coorg tāluk, Somwarpēt Nād, at Doddamolathe village, 3½ miles from Somwarpēt. A.P.R., 1916-17, pp. 36-37.

<sup>1</sup> Formerly in North Arcot district.

<sup>2</sup> Formerly in North Arcot district.



### C. TRAVANCORE STATE

35. In the hills inhabited by Malayarayana. S. Mateer, *Native Life in Travancore*; L. A. Krishna Iyer in *Modern Review*, March, 1946, p. 185.
36. Perunthalpāra, L. A. Krishna Iyer in *Modern Review*, March, 1946.
37. On the Tea Estate of Thengakkal, 9 miles from Vāndiperiyār, which is about 60 miles E. of Kottayam. *Memoirs of the Archaeological Department of Travancore*, no. 1, pp. 6-7.
38. At Vamanapuram, 22 miles N. of Trivandrum. Information from Travancore State Archaeological Department.

### D. PUDUKOTTAI STATE

39. Kolattūr tāluk,  $\frac{1}{2}$  mile north of Tāyinippatti village, on Annavasal-Kiranur road. *Report on the Administration of the State Museum Pudukottai*, 1940; *Manual of the Pudukottai State*, II, part ii, p. 1099.
40. Tirumaiyam tāluk, Sittannavāsai village, 2 miles E. of Annavāsa, *Report on the Administration of the State Museum, Pudukottai*, Fasli 1344 (1935 A.D.), pp. 2-3; Ap. 3.
41. Tirumaiyam tāluk, Tuttūr village, on the slope of the Tuttumalai. *Manual of the Pudukottai State*, II, part ii, p. 121.

### E. COCHIN STATE

42. Talappalli tāluk, at Porkkalam village,  $3\frac{1}{2}$  miles to the N. of Kunnankulam.
43. Koothandan Thande. L. A. Krishna Iyer in *Modern Review*, March, 1946, p. 187.

### F. MYSORE STATE

44. Bangalore district, at Chikkajāla village, 15 miles N. of Bangalore: cist-circle cemetery up to 1 mile E. of village. In two cases where the cist is visible there is a port-hole in the E. end. Cover-slabs as much as  $15 \times 15$  feet.
45. Bangalore district, Devanahalli taluk, at Sonnappanhalli village,  $13\frac{1}{2}$  miles N. of Bangalore, cist cemetery. Only cist sufficiently visible shows port-hole  $2\frac{1}{4}$  feet in diameter.
46. Bangalore district, near Savandurg, 22 miles W.S.W. of Bangalore: large cist-circle cemetery in jungle. Where visible, the cists have port-holes. Some pottery and iron work from these cists in the Bangalore Museum. *Indian Antiquary*, X (1881), pp. 1-12, 99.
47. Chitaldrug district, at Budnapur, about 3 miles W. of Chitaldrug. Information from Mysore State Archaeological Department.
48. Chitaldrug district, at Chandravalli. Information from Mysore State Archaeological Department.
49. Chitaldrug district, at Ganjipatta, about 6 miles W. of Chitaldrug. Information from Mysore State Archaeological Department.
50. Chitaldrug district, Molakālmuru tāluk, near Siddāpur village (Brahmagiri). Present report.
51. Chitaldrug district, at Nandanahōsūr, about 12 miles W. of Chitaldrug. Information from Mysore State Archaeological Department.
52. Mysore district, at Bettadpūr village.
53. Kolār district, at Humgunda village. Information from Mysore State Archaeological Department.
54. Kolār district, at Humgunda village. Information from Mysore State Archaeological Department.
55. Kolār district, at Parendapalli village. Information from Mysore State Archaeological Department.

### G. HYDERABAD

56. Atrāf-i-Balda district, at Hashmatpet, about 5 miles from Hyderabad city. (Protected monument.)
57. Gulbarga district, Andōla tāluk, near Jiwarji village, about 3 miles S. of the Bhīmā river, on the road between Gulbarga, Ferozabad and Shorapur. Meadows Taylor, p. 16, *J.R.A.S. Bomb.*, III (1851), 179ff.; IV, 380.
58. Gulbarga district, Raigir, E. H. Hunt in *Journ. of the Hyderabad Arch. Soc.*, 1916, pp. 180ff.; and *Journ. of the Roy. Anthropological Inst.*, LIV (1924), 140ff.
59. Gulbarga district, Shorāpūr tāluk, about  $1\frac{1}{2}$  miles S. of Hegaratgi village, 4 miles W. of Rajanakallur, between the Bhīmā and Krishnā rivers and near the bank of the Dona river. Meadows Taylor, pp. 22-25, 92-93, pl. VI.



60. Gulbarga district, Shorāpūr tāluk, near Rajanakallūr village, immediately above the junction of the Bhīmā and Krishnā rivers. Meadows Taylor, pp. 5, 25, 88, pl. I, figs. 3 and 4; Fergusson, p. 469.
61. Raichūr district, at Agoli village, near Gangāvati.
62. Raichūr district, at Bankal village, near Gangāvati, K. M. Ahmad, *Note on the Excavation and Survey of Prehistoric sites in the Raichur district of Hyderabad*, p. 5.
63. Raichūr district, at Kopbal village, near Gangāvati.
64. Raichūr district, Yemmi Guda. Meadows Taylor, pp. 57-58.

## H. BOMBAY PRESIDENCY

65. Bijāpūr district, Aihole village, H. Cousens, *Chālukyan Architecture* (A.S.I., 1926), p. 138.

## APPENDIX E

*The distribution of rouletted ware and painted 'Āndhra' pottery* (map, fig. 52)

(i) 'Rouletted ware', since its discovery in association with imported Arretine ware of the second quarter of the first century A.D. at Arikamedu (Pondicherry) in 1945 and the recognition that its distinctive decoration is derived from that ware, has provided a chronological fixed-point in South India. Preliminary enquiry indicates that its distribution was a wide one, and future research may be expected to produce a long list of sites on which its occurrence will be of cardinal value to the excavator. The known sites are as follows:—

## A. FRENCH INDIA

1. Arikamedu, Pondicherry. *Ancient India*, no. 2 (1946), pp. 45ff.

## B. MADRAS PRESIDENCY

2. Amarāvati, Guntur district. *Ibid.*, p. 49.

## C. MYSORE STATE

3. Chandravalli, Chitaldrug district. Present report.
4. Brahmagiri, Chitaldrug district. Present report.

## D. HYDERABAD STATE

5. Konḍāpur, 43 miles N.W. of Hyderabad city. Information from the Director of Archaeology, Nizam's Government.
6. Māski, 65 miles W. of Raichūr junction. Information as above.

## E. ORISSA

7. Bhubaneswar, Puri district. Found in Śiśupālgarh (1948). Omitted from map.

(ii) Russet-coloured pottery painted with white or yellow rectilinear patterns is characteristic of Āndhra sites in the Deccan, and is now known to have been in vogue during the first and second centuries A.D. A first list of known sites is here appended:—

## A. MADRAS PRESIDENCY

1. Amarāvati, Guntur district. R.E.M.W.
2. Sanganakal, Bellary taluk, Bellary district. Information from B. Subba Rao.
3. Bellary town. Information from B. Subba Rao.
4. Gurjala, Adoni tāluk, Bellary district. Information from B. Subba Rao.
5. Nagaldinna, Adoni tāluk, Bellary district. Information from B. Subba Rao.



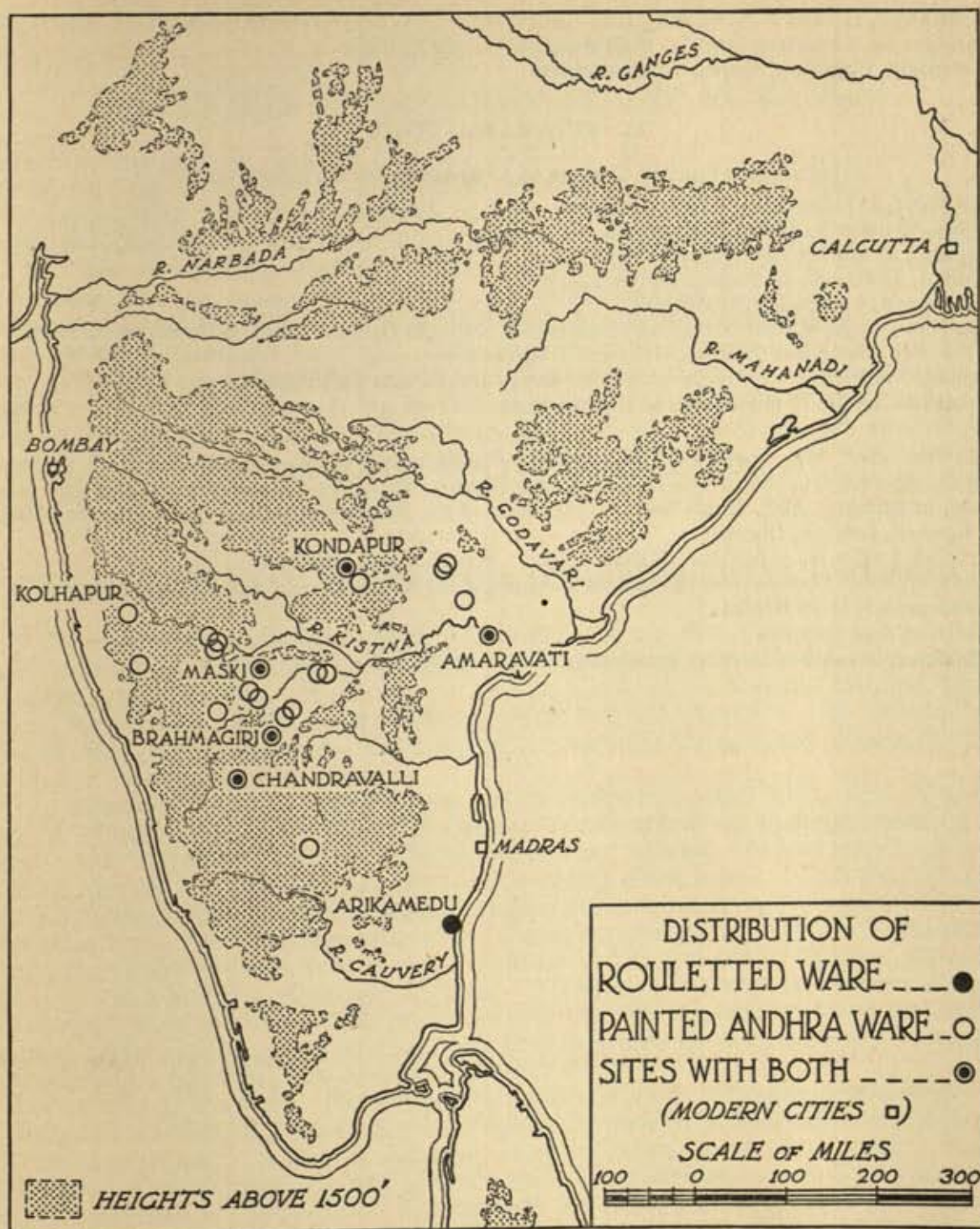


FIG. 52

(Add rouletted ware from Śiśupālgarh at Bhubaneswar, Orissa, 430 miles N.E. of Amarāvati.)



## B. MYSORE STATE

6. Tarmanhalli, 11 miles N.W. of Bangalore. Information from the Director of Archaeology, Mysore State.
7. Chandravalli, Chitaldrug district. Present report.
8. Brahmagiri, Chitaldrug district. Present report.

## C. HYDERABAD STATE

(Information from the Director of Archaeology, Nizam's Government.)

9. Konḍāpur, 43 miles N.W. of Hyderabad city.
10. Māski, 65 miles W. of Raichūr junction.
11. Tolkattā, 21 miles W. of Hyderabad city.
12. Panigiri, 33 miles E. of Jangaon railway station.
13. Gujulbanda, 4 miles S.W. of Panigiri.
14. Anagundi, on the N. bank of the Tungabhadra river, opposite Hampi. Cf. R. B. Foote, *Indian Prehist. and Protohist. Antiquities* (Madras, 1916), p. 127 and pl. 53.
15. Benkal, 7 miles west of Gangāwati, a tāluk headquarters in the Raichūr district.
16. Nyalakondapalli, 16 miles south of Khammameth.

## D. BOMBAY PRESIDENCY AND ADJACENT STATES

17. Itagi, in Shirahatt tāluk, Sangli State, on the banks of the Tungabhadra river. Pottery in the Kannada Research Institute, Dharwar.
18. Herakal, 5 miles N. of Bagalkot, Bijāpur district. Pottery also at Dhārwar.
19. Siddāpur, about 12 miles from Herakal on the banks of the Krishnā river. Pottery also at Dhārwar.
20. Gundanapalli, N. of Herakal.
21. Vadgāon, near Belgaum.
22. Kolhāpur, in south of Bombay Presidency.